

SAMSUNG

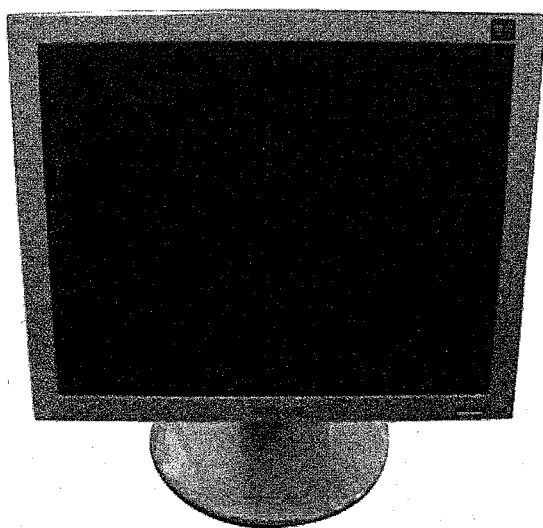
TFT-LCD MONITOR

Chassis
DI19PS

Model
193P

SERVICE Manual

TFT-LCD MONITOR



CONTENTS

1. Precautions
2. Product Specifications
3. Disassembly & Reassembly
4. Alignment & Adjustments
5. Troubleshooting
6. Exploded View & Parts List
7. Electrical Parts List
8. Block Diagram
9. Wiring Diagram
10. PCB Layout
11. Schematic Diagrams
12. Panel Description

Copyright

© 2003 by Samsung Electronics Co., Ltd.

All rights reserved.

This manual may not, in whole or in part, be copied, photocopied, reproduced, translated, or converted to any electronic or machine readable form without prior written permission of Samsung Electronics Co., Ltd.

DI19PS Service Manual
First edition October 2003.

Printed in Korea.

Trademarks

Samsung is a registered trademark and DI19PS and MacMaster Cable Adapter are trademarks of Samsung Electronics Co., Ltd.

Macintosh and Power Macintosh are trademarks of Apple Computer, Inc.

All other trademarks are the property of their respective owners.

1 Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1 Safety Precautions

1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power and DC Power Jack before servicing.
3. When the chassis is operating, semiconductor heatsinks are potential shock hazards.

1-1-2 Servicing the LCD Monitor

1. When servicing the LCD Monitor, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the chassis and the anode lead. (Disconnect the AC line cord from the AC outlet.)
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

1-1-3 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):
WARNING: Do not use an isolation transformer during this test.

Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances*), and Underwriters Laboratories (UL Publication UL1410, 59.7).

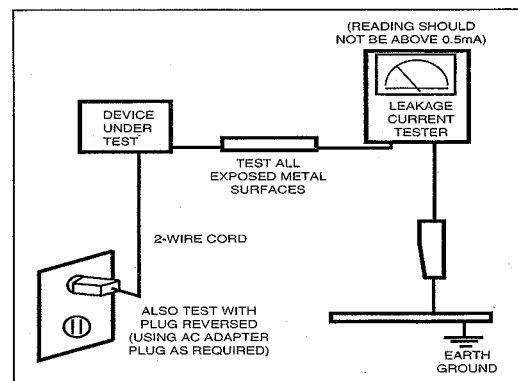


Figure 1-1. Leakage Current Test Circuit

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

1-1-4 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2 Servicing Precautions

WARNING: An electrolytic capacitor installed with the wrong polarity might explode.

Caution: Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.

Note: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

1-2-1 General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:
(a) remove or reinstall any component or assembly,
(b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.
The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
Caution: Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

2 Product Specifications

2-1 Specifications

Item	Description
LCD Panel	TFT-LCD panel, RGB vertical stripe, normaly black, 19-Inch viewable, 0.294 mm pixel pitch
Scanning Frequency	Horizontal : 30 kHz ~ 81kHz (Automatic) Vertical : 56 Hz ~ 75 Hz (Automatic)
Display Colors	16.7 Million colors
Maximum Resolution	Horizontal : 1280 Pixels Vertical : 1024 Pixels
Input Video Signal	Analog, 0.7 Vp-p \pm 1% positive at 75 Ω , internally terminated, Digital, TMDS
Input Sync Signal	Type : Seperate H/V sync, Composite H/V, Sync-on-Green (option), automatic synchronization without external switch of sync type Level : TTL level
Maximum Pixel Clock rate	135 MHz
Active Display (H / V)	376.32 (H)mm / 301.056 (V)mm
AC power voltage & Frequency	AC 100 ~ 240 VAC (+ / - 10%), 60 / 50 Hz \sim \pm 3 Hz
Power Consumption	40 W (MAX)
Dimensions(W x D x H) Set Package	16.7 x 1.7 x 13.8 Inches (423 x 44.2 x 351.5 mm) 16.7 x 9.3 x 16.2 Inches (423 x 236.2 x 412.7 mm) State of stand installed 16.7 x 4.1 x 13.8 Inches (423 x 103 x 351.5 mm) State of stand folded 20.6 x 17.8 x 7.2 Inches (524 x 453 x 183 mm)
Weight Set Package	7.1 kg (15.7 lbs) 9.4 kg (20.7 lbs)
Environmental Considerations	Operating Temperature : 50 °F ~ 104 °F (10 °C ~ 40 °C) Operating Humidity : 10 % ~ 80 % Storage Temperature : 13 °F to 113 °F (-25 °C ~ 45 °C) Storage Humidity : 5 % ~ 95 %
<ul style="list-style-type: none"> • Designs and specifications are subject to change without prior notice. 	

2-2 Pin Assignments

Pin No.	Sync Type	15-Pin Signal Cable Connector		
		Separate	Composite	Sync-on-green (Option)
1		Red	Red	Red
2		Green	Green	Green + H/V Sync
3		Blue	Blue	Blue
4		GND	GND	GND
5		GND (DDC Return)	GND (DDC Return)	GND (DDC Return)
6		GND-R	GND-R	GND-R
7		GND-G	GND-G	GND-G
8		GND-B	GND-B	GND-B
9		No Connection	No Connection	Not Used
10		GND-Sync/Self Test	GND-Sync/Self Test	GND-Sync/Self Test
11		GND	GND	GND
12		DDC Data	DDC Data	DDC Data
13		H-Sync	H/V-Sync	Not Used
14		V-Sync	Not Used	Not Used
15		DDC Data	DDC Data	DDC Data

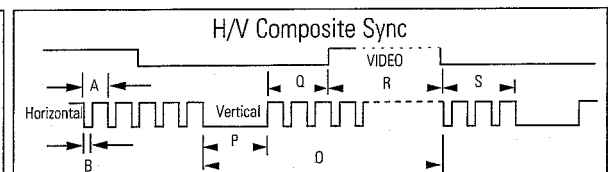
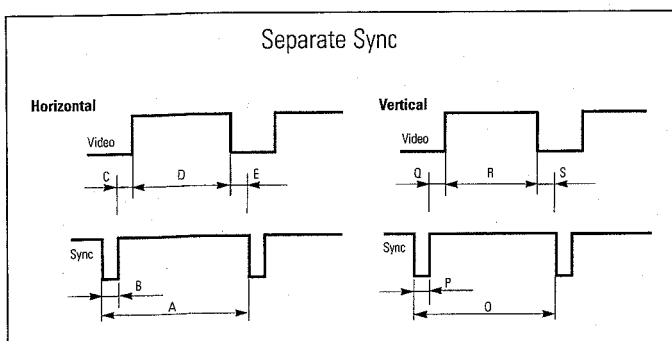
Pin No.	Sync Type	24P DVI-D		
1		Rx2-	13	No Connection
2		Rx2+	14	+5V_M
3		GND	15	Self Raster
4		No Connection	16	+5V_M
5		No Connection	17	Rx0-
6		DDC Clock (SCL)	18	Rx0+
7		DDC Data (SDA)	19	NC
8		NC	20	No Connection
9		Rx1-	21	No Connection
10		Rx1+	22	NC
11		NC	23	RxC+
12		No Connection	24	RxC-

2-3 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 2-1 Timing Chart

Mode Timing	IBM			VESA			
	VGA1/70 Hz 640 x 350	VGA2/70 Hz 720 x 400	VGA3/60 Hz 640 x 480	640/72 Hz 640 x 480	640/75 Hz 640 x 480	800/56 Hz 800 x 600	800/60 Hz 800 x 600
fH (kHz)	31.469	31.469	31.469	37.861	37.500	35.156	37.879
A μ sec	31.778	31.777	31.778	26.413	26.667	28.444	26.400
B μ sec	3.813	3.813	3.813	1.270	2.032	2.000	3.200
C μ sec	1.589	1.589	1.589	3.810	3.810	3.556	2.200
D μ sec	26.058	26.058	26.058	20.825	20.317	22.222	20.000
E μ sec	0.318	0.318	0.318	0.508	0.508	0.667	1.000
fV (Hz)	70.086	70.087	59.940	72.809	75.000	56.250	60.317
O msec	14.268	14.268	16.683	13.735	13.333	17.778	16.579
P msec	0.064	0.064	0.064	0.079	0.080	0.057	0.106
Q msec	1.716	0.858	0.794	0.528	0.427	0.626	0.607
R msec	11.504	13.155	15.761	13.100	12.800	17.067	15.840
S msec	0.985	0.191	0.064	0.026	0.027	0.028	0.026
Clock Frequency (MHz)	25.175	28.322	25.175	31.500	31.500	36.000	40.000
Polarity							
H.Sync	Positive	Negative	Negative	Negative	Negative	Positive	Positive
V.Sync	Negative	Positive	Negative	Negative	Negative	Negative	Positive
Remark	Separate	Separate	Separate	Separate	Separate	Separate	Separate

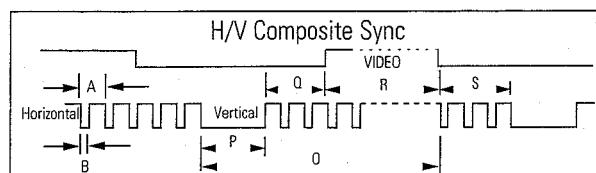
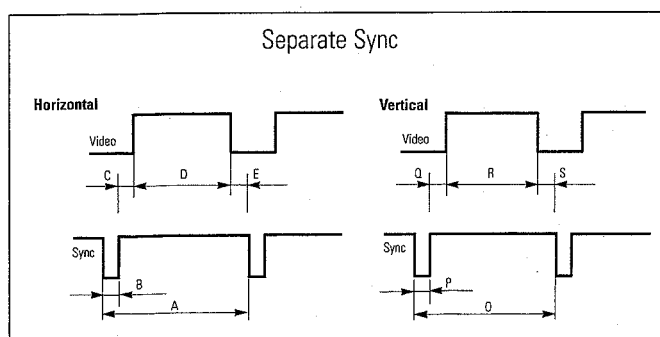


A : Line time total	B : Horizontal sync width	O : Frame time total	P : Vertical sync width
C : Back porch	D : Active time	Q : Back porch	R : Active time
E : Front porch		S : Front porch	

2 Product Specifications

Table 2-2 Timing Chart

Mode Timing	IBM		VESA						
	VGA2/ 70 Hz 720 x 400	VGA3/ 60 Hz 640 x 480	640/75 Hz 640 x 480	800/60 Hz 800 x 600	800/75 Hz 800 x 600	1024/60 Hz 1024 x 768	1024/75 Hz 1024 x 768	1280/60 Hz 1280 x 1024 (Analog)	1280/75 Hz 1280 x 1024 (Analog)
fH (kHz)	31.469	31.469	37.500	37.879	46.875	48.363	60.023	63.981	79.975
A μ sec	31.777	31.778	26.667	26.400	21.333	20.677	16.660	11.852	12.504
B μ sec	3.813	3.813	2.032	3.200	1.616	2.092	1.219	1.037	1.067
C μ sec	1.589	1.589	3.810	2.200	3.232	2.462	2.235	2.296	1.837
D μ sec	26.058	26.058	20.317	20.000	16.162	15.754	13.003	9.259	9.481
E μ sec	0.318	0.318	0.508	0.000	0.323	0.369	0.203	0.000	0.119
fV (Hz)	70.087	59.940	75.000	60.317	75.000	60.004	75.029	60.020	75.025
O msec	14.268	16.683	13.333	16.579	13.333	16.666	13.328	16.005	13.329
P msec	0.064	0.064	0.080	0.106	0.064	0.124	0.050	0.047	0.038
Q msec	0.858	0.794	0.427	0.607	0.448	0.600	0.466	0.594	0.475
R msec	13.155	15.761	12.800	15.840	12.800	15.880	12.795	15.630	12.804
S msec	0.191	0.064	0.027	0.0261	0.021	0.062	0.017	0.016	0.013
Clock Freq. (MHz)	28.322	26.175	31.500	40.000	49.500	75.000	78.750	108.000	135.000
Polarity H.Sync	Negative	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive
V.Sync	Positive	Negative	Negative	Positive	Positive	Negative	Positive	Positive	Positive
Remark	Separate	Separate	Separate	Separate	Separate	Separate	Separate	Separate	Separate



A : Line time total	B : Horizontal sync width	O : Frame time total	P : Vertical sync width
C : Back porch	D : Active time	Q : Back porch	R : Active time
E : Front porch		S : Front porch	

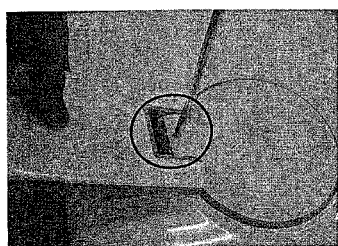
3 Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the DI19PS monitor.

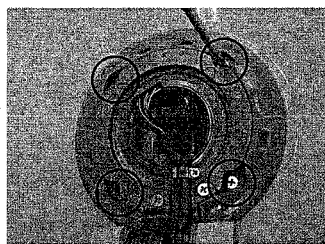
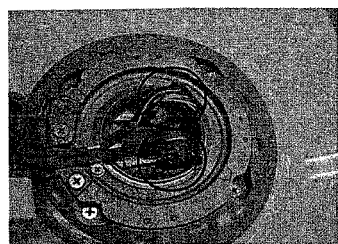
WARNING: This monitor contains electrostatically sensitive devices. Use caution when handling these components.

3-1 Disassembly

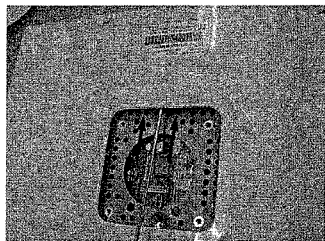
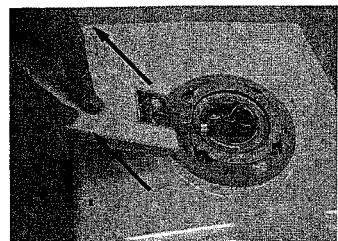
- Cautions :**
1. Disconnect the monitor from the power source before disassembly.
 2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.
 3. R/Cover opening jig : BH81-00001A



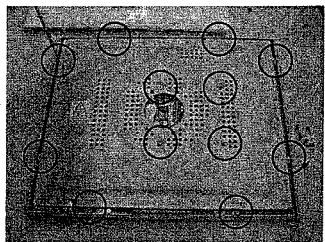
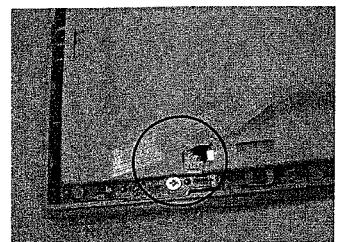
1. Place monitor face down on cushioned table. Remove 1 screws from grip on the stand and remove back cover from the stand.



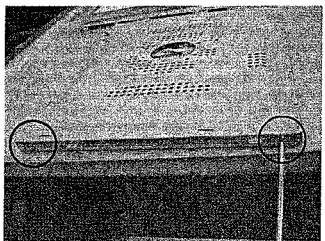
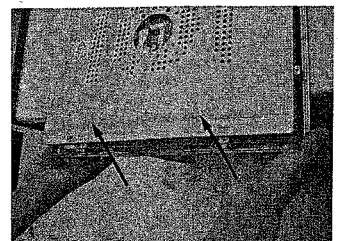
2. Disconnect cable and remove 4 screws from the stand.



3. Lift up the stand and insert the opening drive into the grooves at each side and press until it clicks.

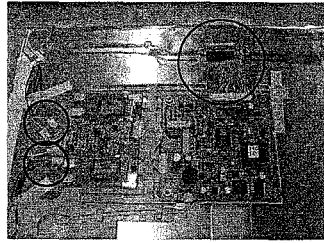
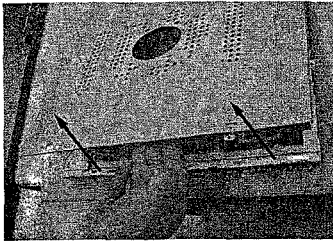


4. Disconnect function cable and remove 12 screws from the shield.

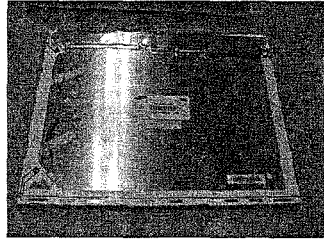
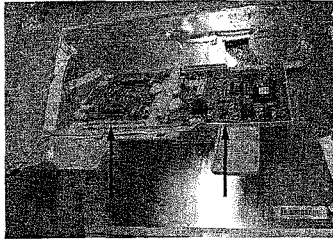


5. Remove the cover front and remove 4 screws from the panel.

3 Disassembly and Reassembly

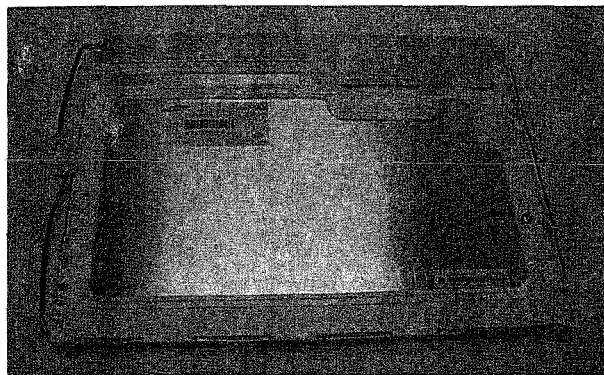


6. Remove shield from the panel and disconnect inverter cable, LVDS cable from the main boards.

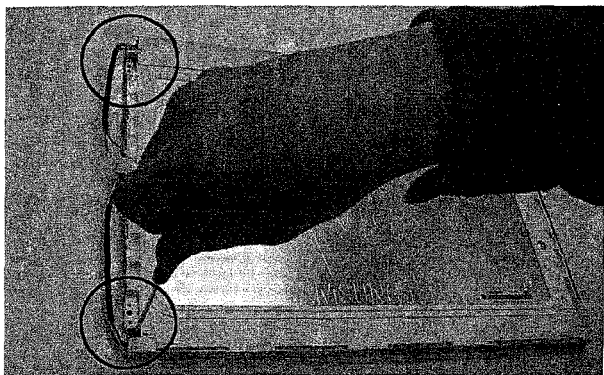


7. Remove main board from the panel.

3-2 Replacement Order of Lamp Assemblies



1. After confirm there is nothing on the desk, turn the LCD module over and put it on a flat desk set to the ground.

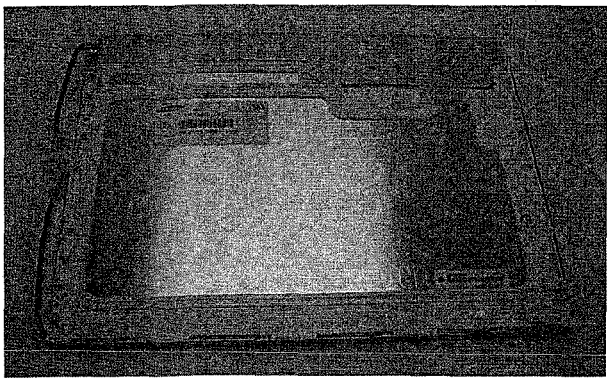


2. Remove 2 screws for the lamp unit.

← Slide the lamp unit



← Slide the lamp unit



3. Slide the lamp unit. Please take out the lamp units from the LCD module.

4. Please fix the new lamp units on the LCD module : opposite process 2 and 3.

3-3 Reassembly

Reassembly procedures are in the reverse order of disassembly procedures.

Memo

4 Alignments and Adjustments

This is to illustrate jig installation required for DDC EDID input. DDC EDID input is necessary to adjust black level and R, G, B for FPD when replacing AD board. This section also explains how to adjust OSD when replacing panel or lamp.

4-1 Required Equipment

The following equipment is required for monitor adjustment

- Computer with Windows 95, Windows 98, or NT
- MTI-2031 DDC Manager Jig

4-2 Automatic Color Adjustment

Use 16-grey or black and white pattern for video input.

1. With the monitor powered off, press power key and hold until it beeps 10 times.
2. Power the monitor on for screen display.
3. Press the power key and hold until the following figure displays.

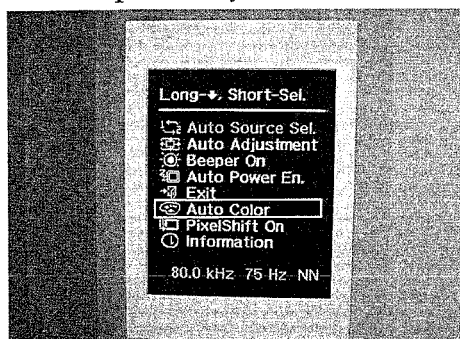


Figure 4-1.

4. Press power key and hold until Auto Color is selected.
5. Press power key again to execute Auto Color.

4-3 DDC EDID Data Input

1. Input DDC EDID data when replacing AD PCB.
2. Receive/Download the proper DDC file for the model from HQ quality control department.
Install the below jig (Figure 4-3) and enter the data.

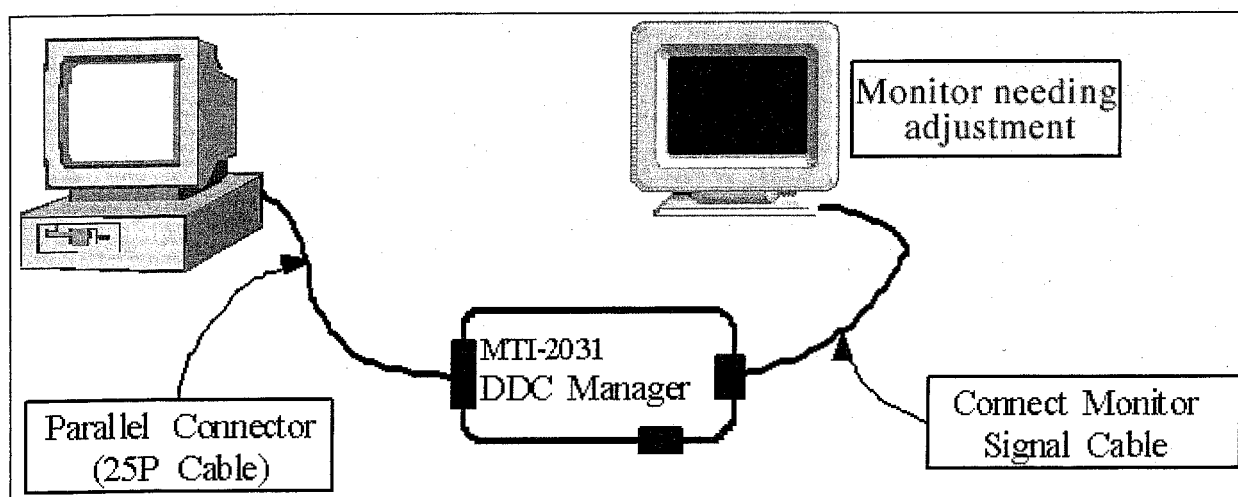


Figure 4-2.

4-4 OSD Adjustment for Panel Replacement

1. Repeat 1, 2 and 3 in above 4-2.
2. Press the key and hold until Information is selected.



Figure 4-3.

3. Press the key again to execute Information.
4. Press the key and hold until Panel is selected.

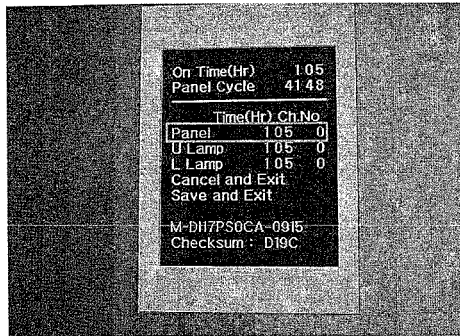


Figure 4-4.

5. Press the key again to change information for Panel.
6. Select Save and Exit to save the change settings and exit from Service Mode.
Select Cancel and Exit to cancel the change settings and exit from Service Mode.

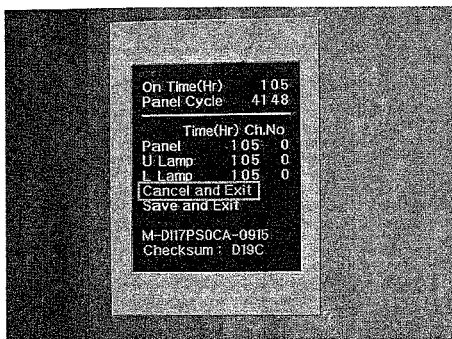


Figure 4-5.

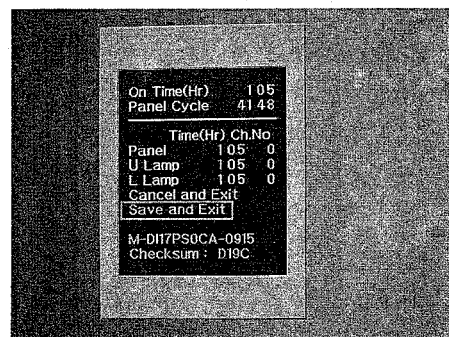


Figure 4-6.

* The below section explains the SVC function. Please read this information first for application.

4-5

4-5-1 How to Display Service Function OSD

1. With the monitor powered off, press power key and hold until it beeps 10 times.
2. Power the monitor on for screen display.
3. Press the power key and hold until the following figure displays.

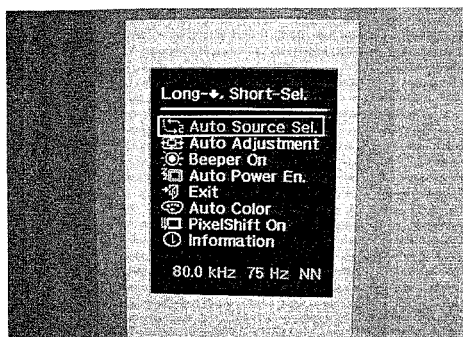


Figure 4-7.

* To exit from Service Function OSD, select 'Exit'.

* Service Function OSD includes:

1. Panel Information
2. Software version
3. Micom Checksum

4-5-2 How to Abjust SVC Function OSD

1. When pressing power key and holding with Panel selected, Panel, U Lamp; L Lamp, Cancel and Exit, and Save and Exit is selected in sequence.

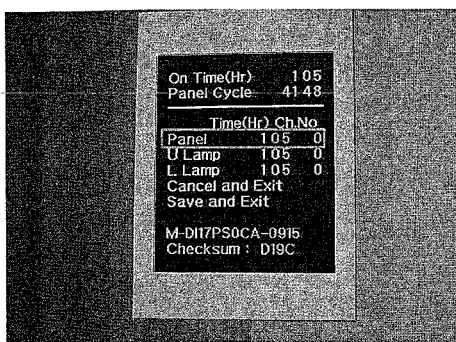


Figure 4-8.

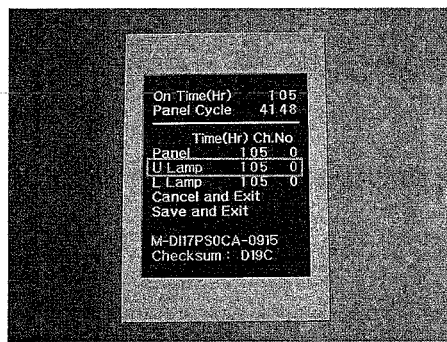


Figure 4-9.

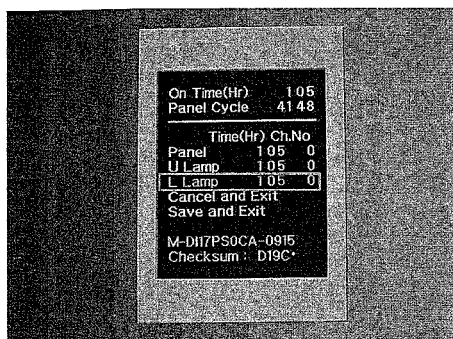


Figure 4-10.

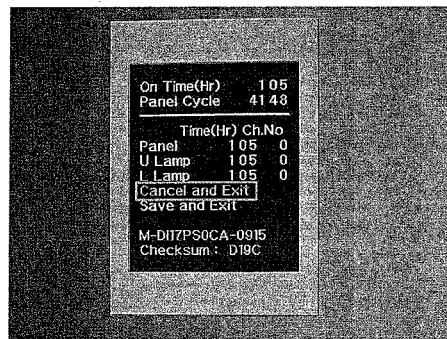


Figure 4-11.

4 Alignments and Adjustments

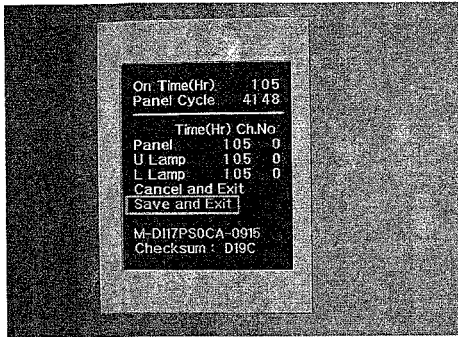


Figure 4-12.

4-5-3 How to Abjust SVC Function OSD

- Always adjust SVC Function OSD after replacing any panel or lamp.
- Panel Replacement

After replacing a panel, press the key and hold until Panel is selected. Press Panel shortly again. Ch.No of the Panel increases by 1 while panel time information (Time(Hr)) changes to '0'. At the same time, other information (U Lamp, L Lamp) changes to '0'.

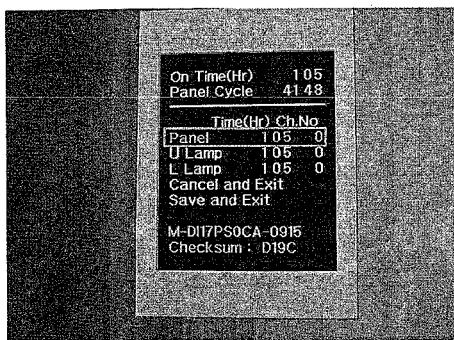


Figure 4-13.

4-5-4 How to Adjust PixelShift

1. PixelShift : On <-> Off

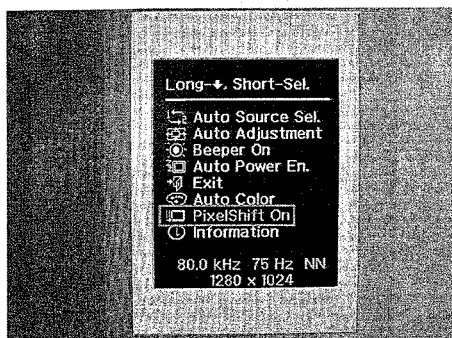


Figure 4-14.

This function protects a displayed image from sticking when the same image is displayed for an extended period of time.

PixelShift On : 0x01 for EEPROM 0x2E

PixelShift Off : Others

Please see the below figure for movement path. It takes 4 minutes for 1-step movement.
(32 steps = 128 minutes)

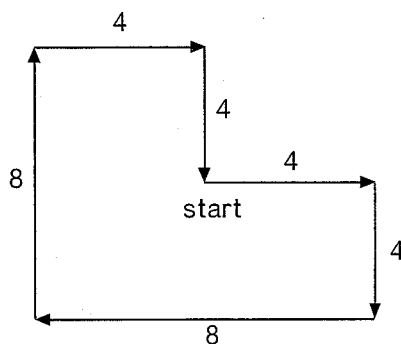


Figure 4-15.

Location is reset when : Power is On or Off.

Image mode is changed.

User operates a key.

Location is not reset in Service Menu.

* Note : When position is set to the minimum or maximum, it does not move smaller or larger.

Memo

5 Troubleshooting

Notes: 1. Before troubleshooting, setup the PC's display as below.

- Resolution: 1280 x 1024
- H-frequency: 48 kHz
- V-frequency: 60 Hz

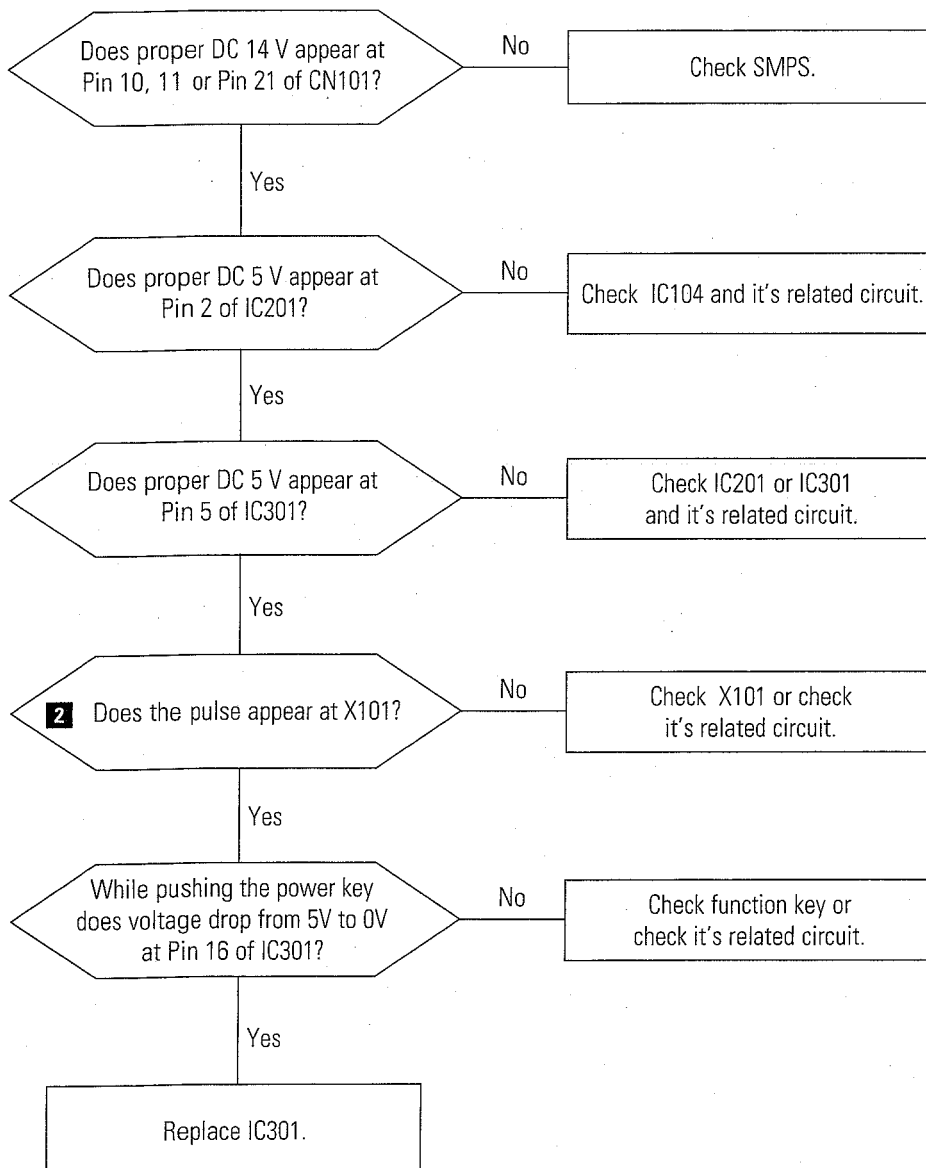
2. If no picture appears, make sure the power cord is correctly connected.

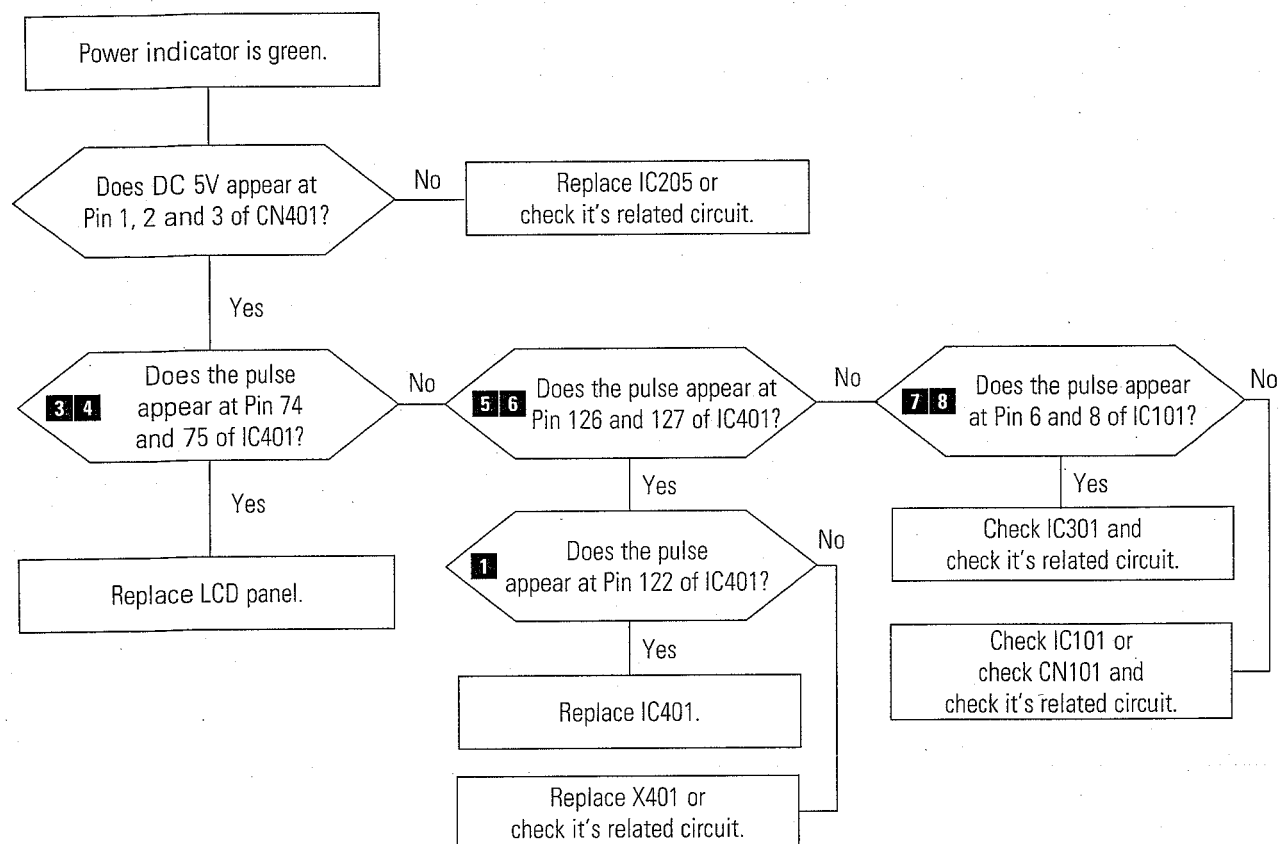
3. Check the following circuits.

- No raster appears: SMPS PCB, Main PCB
- 14V develop but no screen: Main PCB
- 14V does not develop: SMPS PCB

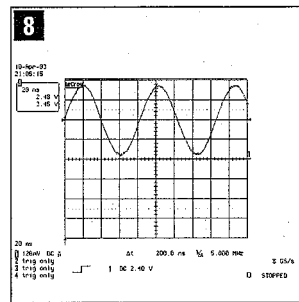
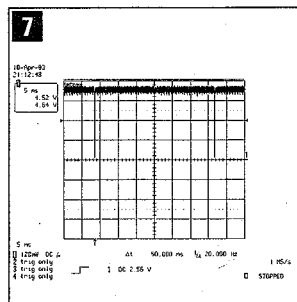
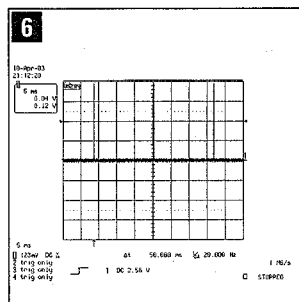
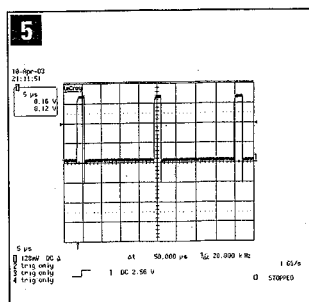
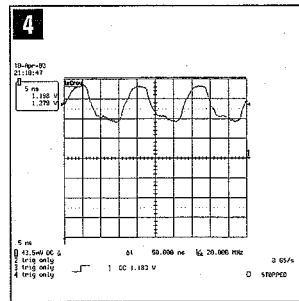
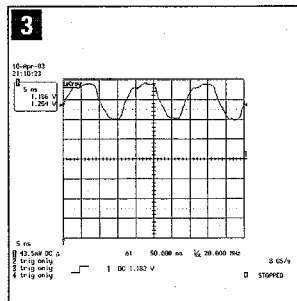
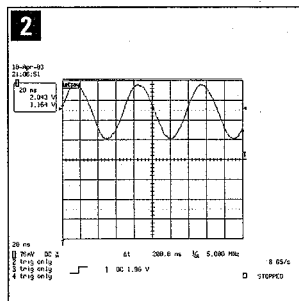
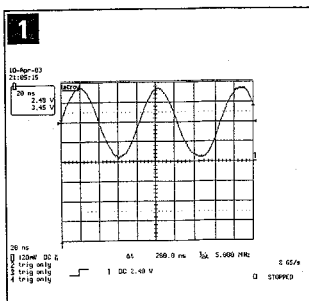
4. State power off, if you push and hold the "Power Key" button for more than 5 seconds, with a "beep" sound, the monitor automatically turn back to the factory preset.

5-1 No Power



5-2 No Video

WAVEFORMS

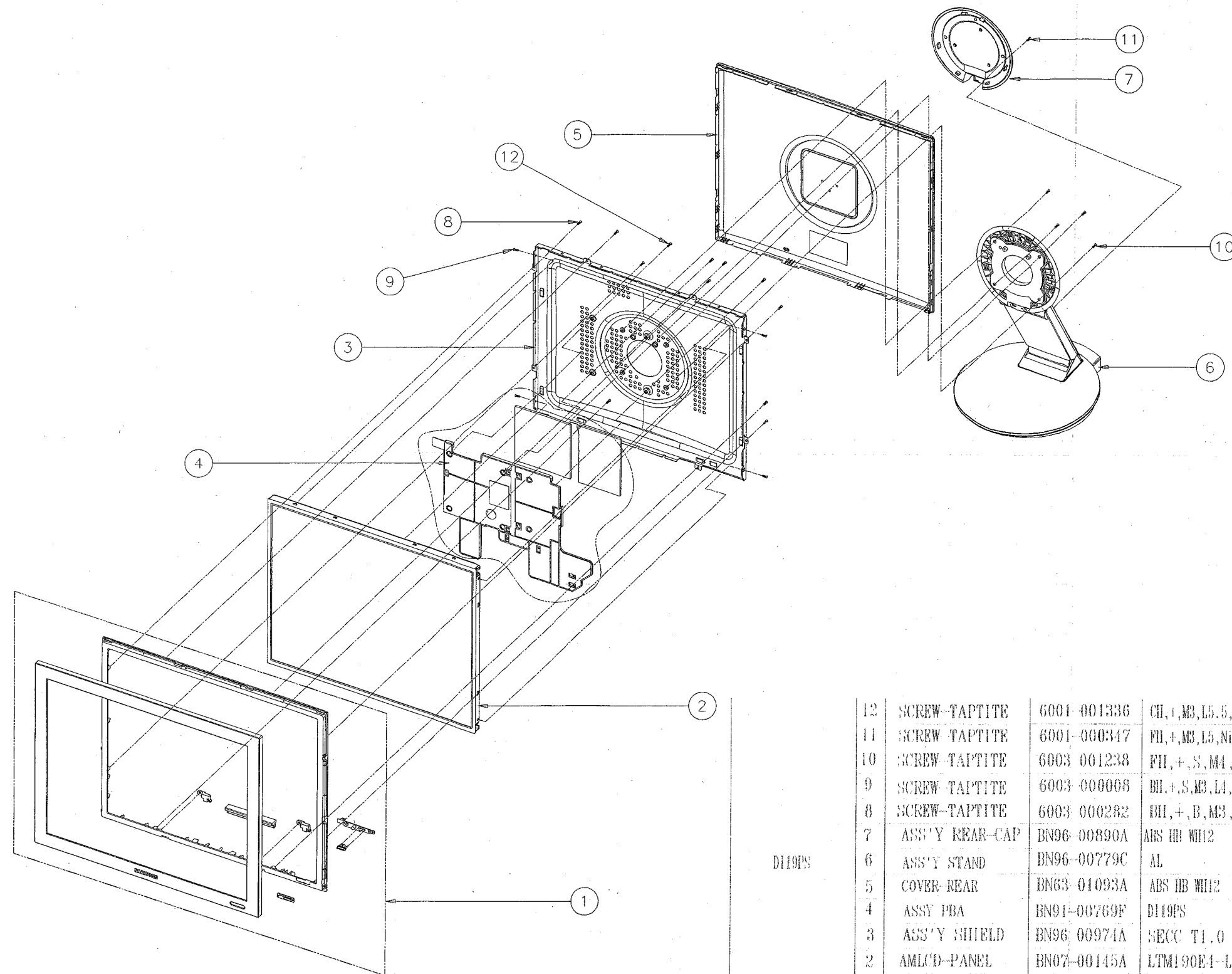


Memo

Copyright © 2011 Sony Electronics Inc.
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage or retrieval system, without prior written permission from Sony Electronics Inc.

6 Exploded View and Parts List

* You can search for updated part codes through ITSELF web site.
URL : <http://itself.sec.samsung.co.kr/>



DI19PS

UNIT CODE NO.		PART NAME		CODE NO.	SPEC.	Q'TY	REMARK
12	SCREW-TAPTITE	6001-001336	CH,+M3,L5.5,ZPC(YEL)	4			
11	SCREW-TAPTITE	6001-000347	FH,+M3,L5,Ni	1			
10	SCREW-TAPTITE	6003-001238	FH,+S,M4,L8	4			
9	SCREW-TAPTITE	6003-000008	BH,+S,M3,L4,ZPC3	4			
8	SCREW-TAPTITE	6003-000282	BH,+B,M3,L8	8			
7	ASS'Y REAR-CAP	BN96-00890A	ABS HB WH12	1			
6	ASS'Y STAND	BN96-00779C	AL	1			
5	COVER-REAR	BN63-01093A	ABS HB WH12	1			
4	ASSY PBA	BN91-00769F	DI19PS	1			
3	ASS'Y SHIELD	BN96-00974A	SECC T1.0	1			
2	AMLCD-PANEL	BN07-00145A	LTM190E1-L01	1			
1	ASS'Y COVER FRONT	BN96-00932A	AL	1			

Memo

7 Electrical Parts List

* You can search for updated part codes through ITSELF web site.

URL : <http://itself.sec.samsung.co.kr/>

7-1-1 DI19PS Main PCB Parts

Level	Loc. No.	Code No.	Description	Specification	Remarks
0		DI19PSQAQ/EDC			
1		E18-DI19PSQAQ/EDC	1	SEC,LTM190E4-L01	
3		BN94-00512G	ASSYPCBMAIN-E18	DI19PS	SNA
4	CIS3	0204-001677	FLUX	DF-201TVS,MIX,0.820,FLUX13%,G	SNA
4	CIS4	0204-001095	THINNER	#4520,-,-,-	SNA
4	CIS6	BN60-00011A	FASTENER-PEM/NUT	MINERVA,SUM24L(SN),M3,-,7.0,6.8,WHT	SNA
4	CIS7	BN63-01079A	GASKET	,CONDUCTIVEFAB,4MM,10MM,10MM,GRAY,32K,71TSSK-10-4-10-13	SNA
4	CN101	3711-005506	CONNECTOR-HEADER	BOX,22P,2R,2mm,STRAIGHT,SN,BLK	SA
4	CN102	3711-005507	CONNECTOR-HEADER	BOX,20P,2R,2mm,STRAIGHT,SN,BLK	SA
4	IC527	3002-001123	BUZZER-PIEZO	85DB,9VDC,8MA,4.4KHZ+/-0.5KHZ,BULK	SA
4	MICOM	BN97-00348D	ASSYMICOM	DI19PS	SNA
5	IC301	0903-001266	IC-MICROCONTROLLER	NT68F63,8BIT,PLCC,44P,653MIL,12MHZ,ST,CMOS,PLASTIC,5V,-,0TO+70C,256B,4KB,-,-,MC	SNA
5	CIS	BN82-00108T	A/SMICOM	DI19PS	SNA
4		BN97-00351G	ASSYSMD-E18	DI19PS	SNA
5	C101	2203-005437	C-CER,CHIP	10000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C102	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	SA
5	C103	2203-000626	C-CER,CHIP	0.022NF,5%,50V,C0G,TP,1608	SA
5	C104	2203-005437	C-CER,CHIP	10000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C107	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C201	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,TP,1608	SA
5	C202	2203-000189	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	C203	2409-001051	C-ORGANIC	82UF,20%,6.3V,WT,TP,6.3*5.9MM,2.1	SA
5	C204	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C205	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C206	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	SA
5	C207	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C208	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	SA
5	C209	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C210	2402-000179	C-AL,SMD	47uF,20%,16V,GP,TP,6.6x6.6x5.4	SA
5	C211	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C212	2203-005437	C-CER,CHIP	10000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C213	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,TP,1608	SA
5	C214	2203-005065	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,TP,1608	SA
5	C301	2203-005437	C-CER,CHIP	10000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C302	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C303	2203-000626	C-CER,CHIP	0.022NF,5%,50V,C0G,TP,1608	SA
5	C304	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C305	2203-005437	C-CER,CHIP	10000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C306	2203-000626	C-CER,CHIP	0.022NF,5%,50V,C0G,TP,1608	SA
5	C307	2203-000975	C-CER,CHIP	47nF,10%,25V,X7R,TP,1608,-	SA
5	C401	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C402	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C403	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C404	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA

Level	Loc. No.	CodeNo.	Description	Specification	Remarks
5	C405	2203-005437	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C406	2203-000384	C-CER,CHIP	0.015NF,5%,50V,C0G,TP,1608	SA
5	C407	2203-000384	C-CER,CHIP	0.015NF,5%,50V,C0G,TP,1608	SA
5	C408	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C409	2203-005437	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C410	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C411	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C413	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C414	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C416	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C417	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C418	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C420	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C421	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C422	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C423	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	SA
5	C424	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C425	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	SA
5	C426	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	SA
5	C427	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	SA
5	C428	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	SA
5	C429	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C430	2402-000176	C-AL,SMD	10uF,20%,16V,GP,TP,4.3x4.3x5.4	SA
5	C431	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C432	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C433	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C434	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C435	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C436	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C437	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C438	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C439	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C440	2203-005437	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C444	2203-005437	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C445	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C447	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C501	2203-005437	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,TP,3216	SA
5	C503	2203-005065	C-CER,CHIP	100nF,+80-20%,10V,Y5V,TP,1608	SA
5	C504	2203-005065	C-CER,CHIP	100nF,+80-20%,10V,Y5V,TP,1608	SA
5	C505	2203-000257	C-CER,CHIP	10nF,10%,50V,X7R,TP,1608	SA
5	C506	2409-001065	C-ORGANIC	82UF,20%,16V,WT,TP,8X6.9MM,-	SA
5	C510	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	C511	2402-001128	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	C512	2203-005005	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	C513	2203-000384	C-CER,CHIP	0.015NF,5%,50V,C0G,TP,1608	SA
5	C514	2203-000384	C-CER,CHIP	0.015NF,5%,50V,C0G,TP,1608	SA
5	CN401	3711-005470	CONNECTOR-HEADER	BOX,30P,1R,1.25mm,SMD-A,Sn+Pb,IVR	SA
5	CN501	3711-005471	CONNECTOR-HEADER	BOX,12P,1R,1.25mm,SMD-A,Sn+Pb,IVR	SA
5	CN502	3711-005509	CONNECTOR-HEADER	BOX,4P,1R,1.25mm,SMD-A,Sn+Pb,IVR	SA
5	D101	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D102	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D103	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D104	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA

Level	Loc. No.	Code No.	Description	Specification	Remarks
5	D105	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D106	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D107	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D108	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D201	0402-001098	DIODE-RECTIFIER	SK34,40V,3A,SMC,TP	SA
5	D401	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D402	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	D403	0401-001056	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	FT203	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT204	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT205	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT206	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT207	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT401	2703-001334	INDUCTOR-SMD	1.5uH,10%,2012	SA
5	FT501	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT502	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT503	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT504	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT505	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT506	2703-001334	INDUCTOR-SMD	1.5uH,10%,2012	SA
5	FT507	2703-001334	INDUCTOR-SMD	1.5uH,10%,2012	SA
5	FT508	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	FT510	2703-001334	INDUCTOR-SMD	1.5uH,10%,2012	SA
5	FT511	3301-001145	BEAD-SMD	4.5x1.6x1.6mm,-,-	SNA
5	IC101	0803-000117	IC-TTL	74F14,INVERTER,SOP,14P,150MIL,	SA
5	IC102	1103-000129	IC-EEPROM	24C02,256x8BIT,SOP,8P,150MIL,1	SA
5	IC201	1203-002843	IC-DC/DCCONVERTER	AP1501-50K5A,T0-263-5L,5P,10.54X9.65MM,PLASTIC,4.75/5.25V,-,40TO+125C,3A,-,TP	SA
5	IC202	1203-001293	IC-POSIFIXEDREG.	033,T0-252,3P,6.5MIL,PLASTIC,3	SA
5	IC203	1203-002450	IC-VOLTAGEREGULATOR	MC33375ST-2.5T3,SOT-223,4P,137MIL,PLASTIC,2.475/2.525V,-,40TO+125C,300MA,-,TP	SA
5	IC204	0505-001170	FET-SILICON	SI9933ADY-T1,P,-20V,3.4A,0.06ohm,2W,SO-8	SA
5	IC205	0505-001170	FET-SILICON	SI9933ADY-T1,P,-20V,3.4A,0.06ohm,2W,SO-8	SA
5	IC301 SOCK	3704-000001	SOCKET-IC	44P,PLCC,SN,-	SA
5	IC302	1103-001023	IC-EEPROM	524C80D81,1028x8BIT,SOP,8P,150MIL,10mS,5V,10%,PLASTIC,0to+70C,110uA,CMOS,TP	SA
5	IC401	1003-001586	IC-LCDCONTROLLER	MST9131E,PQFP,128P,20X14MM,-,1UA,TR,PLASTIC,3.3V,0TO+70C,-,3.30,IBML170P)	SA
5	IC528	1103-000129	IC-EEPROM	24C02,256x8BIT,SOP,8P,150MIL,1	SA
5	IC601	1203-001538	IC-POSIAJUSTREG.	431,SOT-89,3P,-,PLASTIC,2.47/3	SA
5	L201	BN27-00009A	COILCHOKE	SMD12X12X6,EOS,33UH,15%,-,0.128YMAX,2A,DR10X5.0MM,18.5TS,12X12X6,1.8MM,1UEWD.	SA
5	MP1.2	BN41-00353C	PCBMAIN	DI17PS,DI19PS,FR-4,4L,1.0,1T,110*107,2A	SNA
5	Q501	0501-000342	TR-SMALLSIGNAL	KSC1623-Y,NPN,200mW,SOT-23,TP,135-270	SA
5	Q502	0501-000342	TR-SMALLSIGNAL	KSC1623-Y,NPN,200mW,SOT-23,TP,135-270	SA
5	Q601	0501-000342	TR-SMALLSIGNAL	KSC1623-Y,NPN,200mW,SOT-23,TP,135-270	SA
5	R103	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R104	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R105	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	SA
5	R106	2007-000071	R-CHIP	22ohm,5%,1/10W,TP,1608	SA
5	R107	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R108	2007-001002	R-CHIP	510ohm,5%,1/10W,TP,1608	SA
5	R110	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R111	2007-000080	R-CHIP	2Kohm,5%,1/10W,TP,1608	SA
5	R112	2007-001002	R-CHIP	510ohm,5%,1/10W,TP,1608	SA
5	R113	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	SA
5	R114	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	SA
5	R115	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA

7ElectricalPartsList

Level	Loc. No.	Code No.	Description	Specification	Remarks
5	R116	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R117	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R118	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R151	2007-000078	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	R152	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R201	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R206	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R208	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R209	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R211	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R212	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R222	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R303	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R304	2007-000092	R-CHIP	15Kohm,5%,1/10W,TP,1608	SA
5	R305	2007-000092	R-CHIP	15Kohm,5%,1/10W,TP,1608	SA
5	R306	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R307	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R308	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R309	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R312	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R313	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R314	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R315	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R316	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R317	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R318	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R319	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R320	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R321	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R325	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	SA
5	R326	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R327	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R328	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R329	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R330	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R331	2007-000109	R-CHIP	1Mohm,5%,1/10W,TP,1608	SA
5	R332	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R334	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R335	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R336	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R337	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R338	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R339	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R341	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R344	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R345	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R346	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R347	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R348	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R349	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R350	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R352	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R353	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA

Level	Loc. No.	Code No.	Description	Specification	Remarks
5	R356	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R357	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R358	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R359	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R360	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R361	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R362	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R365	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R366	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R401	2007-000109	R-CHIP	1Mohm,5%,1/10W,TP,1608	SA
5	R402	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R403	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R404	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R405	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	SA
5	R406	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	SA
5	R407	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	SA
5	R408	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	SA
5	R409	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	SA
5	R410	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	SA
5	R411	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	SA
5	R412	2007-000309	R-CHIP	10ohm,5%,1/10W,TP,1608	SA
5	R413	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R414	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R415	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R416	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R417	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R418	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R419	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R420	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R421	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R422	2007-0000821	R-CHIP	390ohm,1%,1/10W,TP,1608	SA
5	R423	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R424	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R425	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	R426	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R427	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R428	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R429	2007-000071	R-CHIP	22ohm,5%,1/10W,TP,1608	SA
5	R430	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R431	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R432	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R433	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R434	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R435	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R436	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	R437	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R438	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R439	2007-000072	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	R440	2007-000071	R-CHIP	22ohm,5%,1/10W,TP,1608	SA
5	R441	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R442	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R443	2007-001167	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	R444	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA

7ElectricalPartsList

Level	Loc. No.	Code No.	Description	Specification	Remarks
5	R445	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R446	2007-000071	R-CHIP	22ohm,5%,1/10W,TP,1608	SA
5	R448	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R449	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R450	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R501	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R502	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R503	2007-000077	R-CHIP	470ohm,5%,1/10W,TP,1608	SA
5	R504	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R554	2007-000092	R-CHIP	15Kohm,5%,1/10W,TP,1608	SA
5	R555	2007-000092	R-CHIP	15Kohm,5%,1/10W,TP,1608	SA
5	R601	2007-000066	R-CHIP	20Kohm,1%,1/10W,TP,1608	SA
5	R602	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	SA
5	R603	2007-000043	R-CHIP	1Kohm,1%,1/10W,TP,1608	SA
5	R604	2007-000869	R-CHIP	4.7Kohm,1%,1/10W,TP,1608	SA
5	R605	2007-000076	R-CHIP	330ohm,5%,1/10W,TP,1608	SA
5	R700	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R701	2007-000074	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	R705	2007-000097	R-CHIP	47Kohm,5%,1/10W,TP,1608	SA
5	R707	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R708	2007-000090	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	R710	2007-000084	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	R711	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R712	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	R713	2007-000070	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	X101	2801-003773	CRYSTAL-SMD	12MHZ,30PPM,28-AAN,20PF,500HM,TP	SA
5	X401	2801-003667	CRYSTAL-SMD	14.3182MHZ,50PPM,28-AAN,16,500HM,TP	SA
5	ZD101	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD102	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD104	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD105	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD106	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD107	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD108	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD109	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD110	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD111	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD112	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD705	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD706	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD708	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD709	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD710	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD711	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD712	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA
5	ZD713	0403-000258	DIODE-ZENER	BZX84C5V6,5.2-6V,225MW,SOT-23,TP	SA

7-1-2 DI19PS Others

Level	Loc. No.	Code No.	Description	Specification	Remarks
2	-	BN90-00601A	ASSYSTAND	DI19PS,EUROPE	SNA
3	STD	BN96-00779C	ASSYSTANDP	DI19PS,ABSHBWHITE	SNA
4	STD	0203-001159	TAPE-FILAMENT	#8915,T0.15,W12,L55000,CLR	SNA
4	STD	6001-000346	SCREW-MACHINE	FH,+,M3,L4,ZPC(YEL),SM20C,-	SA
4	STD	6003-000129	SCREW-TAPTITE	BH,+,S,M4,L10,ZPC(YEL),SWRCH18	SNA
4	STD	6003-000259	SCREW-TAPTITE	BH,+,B,M3,L8,ZPC(YEL),SWRCH18A	SNA
4	STD	6003-000276	SCREW-TAPTITE	BH,+,B,M3,L10,ZPC(YEL),SWCH10	SNA
4	STD	6003-001010	SCREW-TAPTITE	FH,+,B,M3,L6,ZPC(YEL),SWRCH18A	SA
4	STD	6003-001119	SCREW-TAPTITE	FH,+,S,M4,L10,YEL,SWRCH18A	SNA
4	STD	6003-001136	SCREW-TAPTITE	BH,+,B,M4,L8,ZPC(YEL),SWRCH18A	SNA
4	STD	6003-001238	SCREW-TAPTITE	FH,+,S,M4,L8,ZPC(BLK),SWRCH18A	SNA
4	STD	6011-001445	BOLT-SOCKET	4-40UNC,L7,NIPLT,BRASS,HEXSOCKET	SNA
4	STD	6501-000113	CABLETIE	DA-100,T1,W2.5,L102,WHT,NYLON	SA
4	STD	BN39-00452A	CBF-STANDCABLE	DI17PS,U120276#32,U1,15P,24P/20P,22P,335mm,BLACK,#32,DC-JACK,DSUB,DVI,YDH200-20/	SA
4	STD	BN61-00251A	FOOT-RUBBER	GH17BS,RUBBER,T1.6	SNA
4	STD	BN61-00827A	STAND-REARBODY	DALI17,ABS	SNA
4	STD	BN61-00828A	STAND-NECKTOP	DALI17,ABS	SNA
4	STD	BN61-00830A	STAND-FRONTBODY	DALI17,ABS	SNA
4	STD	BN61-00841A	STAND-REARDECO	DALI17,ABS	SNA
4	STD	BN61-00844A	STAND-HINGECOVER	DALI17,ABS	SNA
4	STD	BN61-00854A	STAND-BOTTOM	DALI17,ABS	SNA
4	STD	BN61-00855A	STAND-JACKCOVER	DALI17,ABS	SNA
4	STD	BN61-00856A	STAND-SWIVEL	DALI17,ABS	SNA
4	STD	BN61-00857A	STAND-SWIVELCOVER	DALI17,ABS	SNA
4	STD	BN61-00859A	STAND-COVERAL	DALI17,AL	SNA
4	STD	BN61-00860A	STAND-BOTTOMAL	DALI17,AL	SNA
4	STD	BN61-00880A	STAND-GUIDEAL	DALI17,ABS	SNA
4	STD	BN63-00951A	GASKET	RT15NS,CONDUCTIVEFAB,5,17,60,GRAY,32K,71TSSK-17-5-60-13	SNA
4	STD	BN63-01036A	COVER-REARCAPBOTTOM	DALI17,ABS	SNA
4	STD	BN63-01056A	COVER-REARCAPSUB	DALI17,ABS	SNA
4	STD	BN63-01152A	SHEET-ACETAL	DI17PS,ACETAL,T0.4,WHT	SNA
4	STD	BN63-01161A	PROTECTOR-TAPE	DI17PS,T0.4,9*30	SNA
4	STD	BN96-00839B	ASSYMISCP-HINGE	DI19PS,ZNCD2	SNA
4	STD	BN96-00882A	ASSYMISCP-PIVOTHINGE	DI17PS	SNA
2	-	BN90-00618A	ASSYCOVERREAR	DI19PS	SNA
3	C/R	BN63-01093A	COVER-REAR	dali19,ABSHB	SA
2	-	BN90-00629E	ASSYCOVERFRONT	DI19PS	SNA
3	C/F	BN96-00932A	ASSYCOVERP-FRONT	DI19PS,AL	SNA
4	C/F	6003-001522	SCREW-TAPTITE	CH,+,B,M3,L8,ZPC(YEL),SWRCH18A,-	SA
4	C/F	BN61-00809A	HOLDER-COVERLOCK	DALI17,ABS	SNA
4	C/F	BN63-01091A	COVER-FRONT	dali19,ALUMINUM	SA
4	C/F	BN63-01092A	COVER-MIDDLE	dali19,ABSHB	SA
4	C/F	BN63-01142A	SHEET-PROTECT	DI17PS,PC,T0.125,6,6,WHITE	SNA
4	C/F	BN64-00221A	DECORATION-LED	DALI17,PCCLEAR	SNA
4	C/F	BN64-00225A	KNOB-FUNCTION	DALI17,ABSHB	SNA
4	C/F	BN68-00434B	LABEL-TCO03	LCD,TCO'03,PECLAER,T0.05,20*17,6DOSILK	SNA
4	C/F	BN73-00061A	RUBBER-PROTECT	DALI17,RUBBER	SNA

7ElectricalPartsList

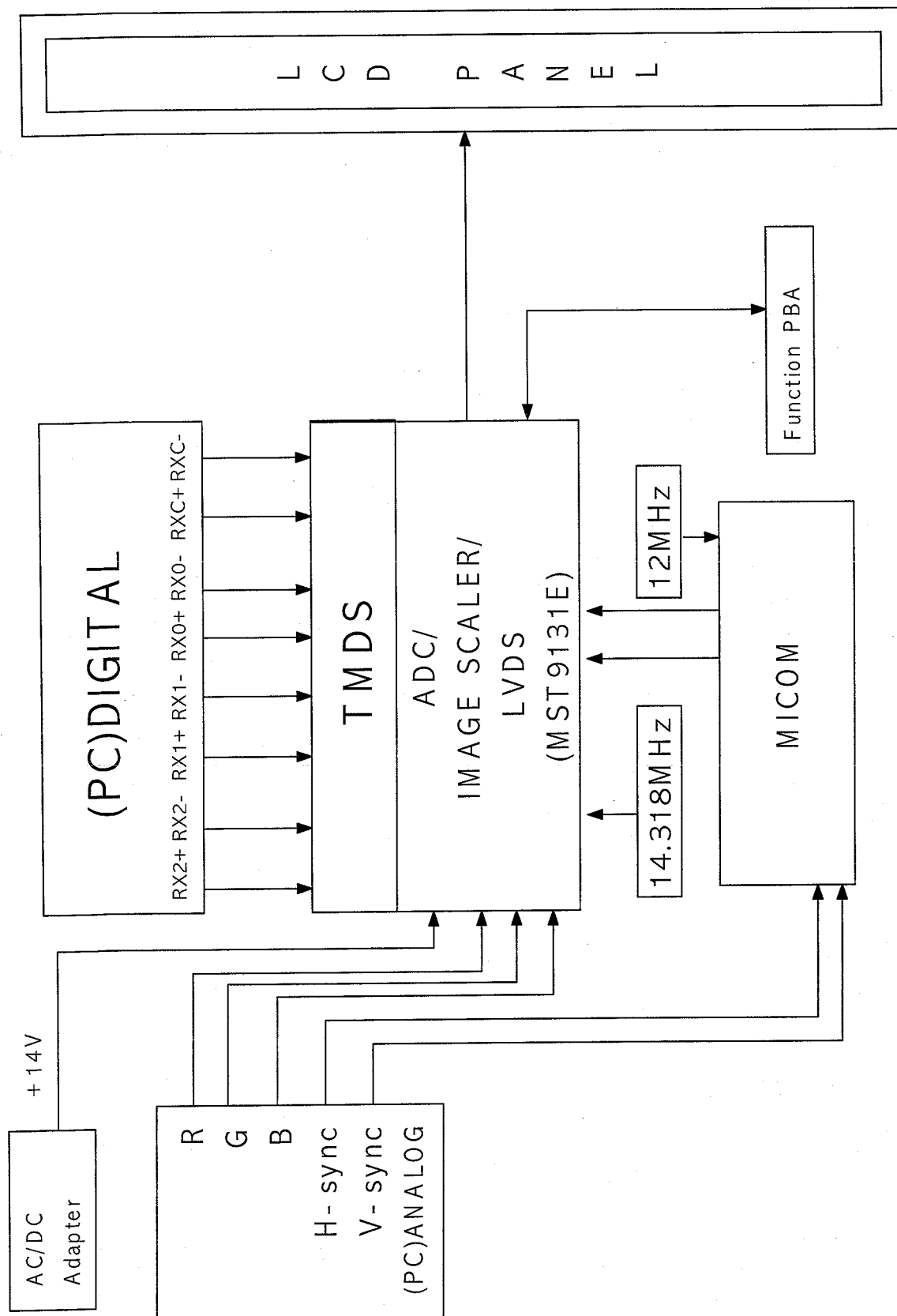
Level	Loc. No.	Code No.	Description	Specification	Remarks
4	C/F	BN96-00848A	ASSYBOARDP-FUNCTION	DI17PS,FUNCTION	SA
2	-	BN91-00349K	ASSYLCD-E18	DI19PS	SNA
3	LCD	BN07-00145A	LCD	LTM190E4-L01,1703,16.7M,404.2*330*20,16.7M,70.0.098*0.294,0-50,5V,PVA	SNA
2	-	BN91-00493A	ASSYMISC-ADAPTOR	MT17B0,MT17B0-SXV2/8384	SNA
3	CIS	BN44-00071A	ADAPTOR	AP004214-UV,LCDTM,90-264V,47-63HZ,+14VDC,3.0A,AC/DC,0T0+40C,120*55*31	SA
2	-	BN91-00769F	ASSYCHASSIS-E18	DI19PS	SA
3	CIS	BN39-00395B	LEADCONNECTOR	DS17BS,UL1571#30,UL/CSA,30P,90mm,#30,12507HS-30,HS-30-BB100,BK,90mm,1571#30,SJ03	SA
3	CIS	BN39-00419A	LEADCONNECTOR	DS17BS,UL1571#30,UL/CSA,12P,70MM,#30,12507HS-12L,12507HS-12L,BK,SJ03-01-288,NON-	SA
3	CIS	BN39-00465A	LEADCONNECTOR	DI19PS,UL1061#28,UL/CSA,4P,270MM,#28,12506HS-04,12507HS-04L,BK,TAPE	SNA
3	CIS	BN44-00103A	INVERTER	172X,SIC841,48KHz,13.5V/5.0V,2.0mA,7.4mA,100*71*8mm,4Lamp,48KHz	SA
3	CIS	BN61-00943A	HOLDER-PCB	DALI19,ABS	SNA
2	-	BN91-00772E	ASSYSHIELD	DI19PS	SNA
3	C/F+SH/PCB	6003-000282	SCREW-TAPTITE	BH,+B,M3,L8,ZPC(BLK),SWCH10	SNA
3	C/F+STD	6003-001238	SCREW-TAPTITE	FH,+S,M4,L8,ZPC(BLK),SWRCH18A	SNA
3	CIS	0203-001160	TAPE-FILAMENT	SCOTCH#8915,T0.16,W48,L55M,TRP	SNA
3	M/PCB+SH/COV	6003-001336	SCREW-TAPTITE	CH,+S,M3,L5.5,ZPC(YEL),SWRCH18A,-	SNA
3	SH/PAN+PAN	6003-000008	SCREW-TAPTITE	BH,+S,M3,L4,ZPC3,SWRCH18A	SNA
3	STD/CAP+STD	6001-000347	SCREW-MACHINE	FH,+M3,L5,NIPLT,SM10C,-	SA
3	CIS	BN96-00890A	ASSYSTANDP-CAP	DI17PS,ABSHB,WH12	SNA
3	CIS	BN96-00974A	ASSYMISCP-SHIELDPCB	DI19PS,SECCT1.0	SNA
4	CIS	BH68-30003C	LABEL-00,HIGH,VOLTAGE	SS,ART100G,30*33,YEL	SNA
4	CIS	BN61-00251A	FOOT-RUBBER	GH17BS,RUBBER,T1.6	SNA
4	CIS	BN63-01094A	SHIELD-PCB	DALI19,SECC,T1.0	SA
2	-	BN92-00982A	ASSYP/MATERIAL	DI19PS	SNA
3	P/M	0203-001102	TAPE-OPPMASKING	OPP-2,T0.05,W100,L400M,CLR	SNA
3	P/M	6902-000520	BAGPE	HDPE/NITRON(DOUBLE),T0.015/T0.5(DOUBLE),W700,L700,TRP,28LANGUAGE,2-	SNA
3	P/M	6902-000576	BAGROLL	LDPE,T0.05,W2400,L1000,TRP,-,-	SNA
3	P/M	6902-000604	BAGWRAPPING	LDPE,T0.02,W500,L10000,TRP,-,-	SNA
3	P/M	BH69-00256C	PAD-PACKING-EDGE	MV940,B400,W200,L2030,-,-,YEL,-,-	SNA
3	P/M	BH69-00457B	PACKING-PADBOTTOM	GH15,FOAM,T3.0,930,1000	SNA
3	P/M	BH69-30360A	BAG-AIR	HDPE,T0.2,W1000*L1800,N,-,ALL	SNA
3	P/M	BN68-00129A	LABELSHIPPING	-,LABELSHIPPING,ART-PAPER,100G,-,WHT,BLACK,-,-,-	SNA
3	P/M	BN69-00140S	PAD-PALLETCOVER	IBM(T84H),SW,1000*3600,1250,-,-,-,-,-	SNA
3	P/M	BN69-00140T	PAD-PALLETCOVER	SUN(LSA810),SW,900,3760,-,-,-,-,-	SNA
3	P/M	BN69-00300A	CUSHION-EPE	MO15PS/ES,SHEETPS,T5.0	SNA
3	P/M	BN69-00617G	PALLET-PACKING	DALI19,WOODEN,1060,910,120	SNA
3	P/M	BN69-00674A	CUSHION-L,R	DALI19,EPS	SNA
3	P/M	BN96-00838A	ASSYMISCP-WALLMOUNTING	DI17PS,TEXTURED-01,PP#4636,BLK,SECCT2.0	SNA
4	CIS	BN61-00934A	BRACKET-WALLFRONT	DALI17,SECC,T2.0	SNA
4	CIS	BN61-00935A	BRACKET-WALLREAR	DALI17,SECC,T2.0	SNA
4	CIS	BN61-01043A	BRACKET-WALLMOUNT	DI17PS/DI19PS,SK-5,T0.8	SNA
4	CIS	BN68-00473H	MANUALINSTALL-CARD	DaliWallMount,SyncMaster,en,W/W	SNA
4	CIS	BN96-00196A	ASSYMISCP-SCREW	MODIGLIANI,SCREW-WOOD,SCREWTAPTITE,ANCHOR	SA

Level	Loc. No.	Code No.	Description	Specification	Remarks
2	-	BN92-01009A	ASSYBOX	DI19PS	SNA
3	BOX	BH68-00530C	LABELBOX-01	LABEL-BARCODE,CE+PIVOT+TC003,MOJO90G,WHT	SNA
3	BOX	BH75-10529C	UNIT-HANDLE/PACKING	S/M170MP,PE-LD,PE-HD,-,WHITE,-	SA
4	CIS	BN72-60001A	LEVER-TOP	LSD210TL,PE-LD,WHITE,TFT_LCD	SNA
4	CIS	BN72-60002C	LEVER-BOTTOM	S/M170MP,PE-HD,BLUE	SNA
3	BOX	BN69-00705A	BOX	DI19,SW4,YEL,A-1,W512*D441*H159	SNA
2	-	BN92-01010A	ASSYLABEL	DI19PS	SNA
3	LABEL	BN68-00412F	LABEL-01,BARCODE	ALLMODEL,PE,TO.05,60*35,POLYESTER,NOSILK	SNA
3	LABEL	BN68-00570B	LABELRATING-01	DI19PS(GH19PS),SS,PE,TO.05,90*30,BLK,POLYESTER,EDC	SNA
2	-	BN92-01011N	ASSYACCESSORY	DI19PSQAQ/EDC,EDC,NETHERLANDS	SNA
3	CIS	BN39-00246F	CBFSIGNAL-DVI(D)	1703FP,24P/24P,20276-D(1.0GHz),2000mm,UL20276,BLACK,DVI/MALE,DET.TYPE	SA
3	CIS	BN96-00847N	ASSYACCESSORY	DI17PSQAQ/EDC,EDC,NETHERLANDS	SA
4	CIS	0203-000214	TAPE-OPPMASKING	OPP/W50/CLR,TO.05,W50,L400000,	SNA
4	CIS	6902-000110	BAGPE	LDPE,TO.05,L356,W240,TRP,28,2,PEMARK	SNA
4	CIS	BH39-10339H	CBFPOWERCORD	DET,H05VV-F,250V/10,16A,BLK,25	SA
4	CIS	BH68-00489A	MANUAL-03	RUSSIANW/CARD,SER,RUSSIAN,RUSSIA,MOJO100G	SNA
4	CIS	BH68-70438A	CARD-BLOCWARRANTY-09	TFTLCD,BASIC,EU,MOJO,100G,W21	SNA
4	CIS	BH68-70448A	CARD-01	TFTLCD,SRC,RUSSIA,S/W,120,W210*L120,INSTALLCARD	SNA
4	CIS	BN39-00244B	CBFSIGNAL	MO15PS,15P/15P,20276-N,1830MM,UL20276,BLACK,D-SUB/MALE,DET.TYPE	SA
4	CIS	BN96-00881F	ASSYMANUALP-00,IB+QSG	173P,193P,SyncMaster,W/W,18Langs,BN59-395F+BH68-376L	SNA
5	CIS	BH68-00376L	MANUAL-01	LCDQUICKSETUPGUIDE,SYNCMASER,E/F/S/G/P/L.13LANGS,W/W,MOJO100G,298,420	SA
5	CIS	BN59-00395F	S/WDRIVER-00,IB	SyncMaster,W/W,SyncMaster,18Langs	SNA

Memo

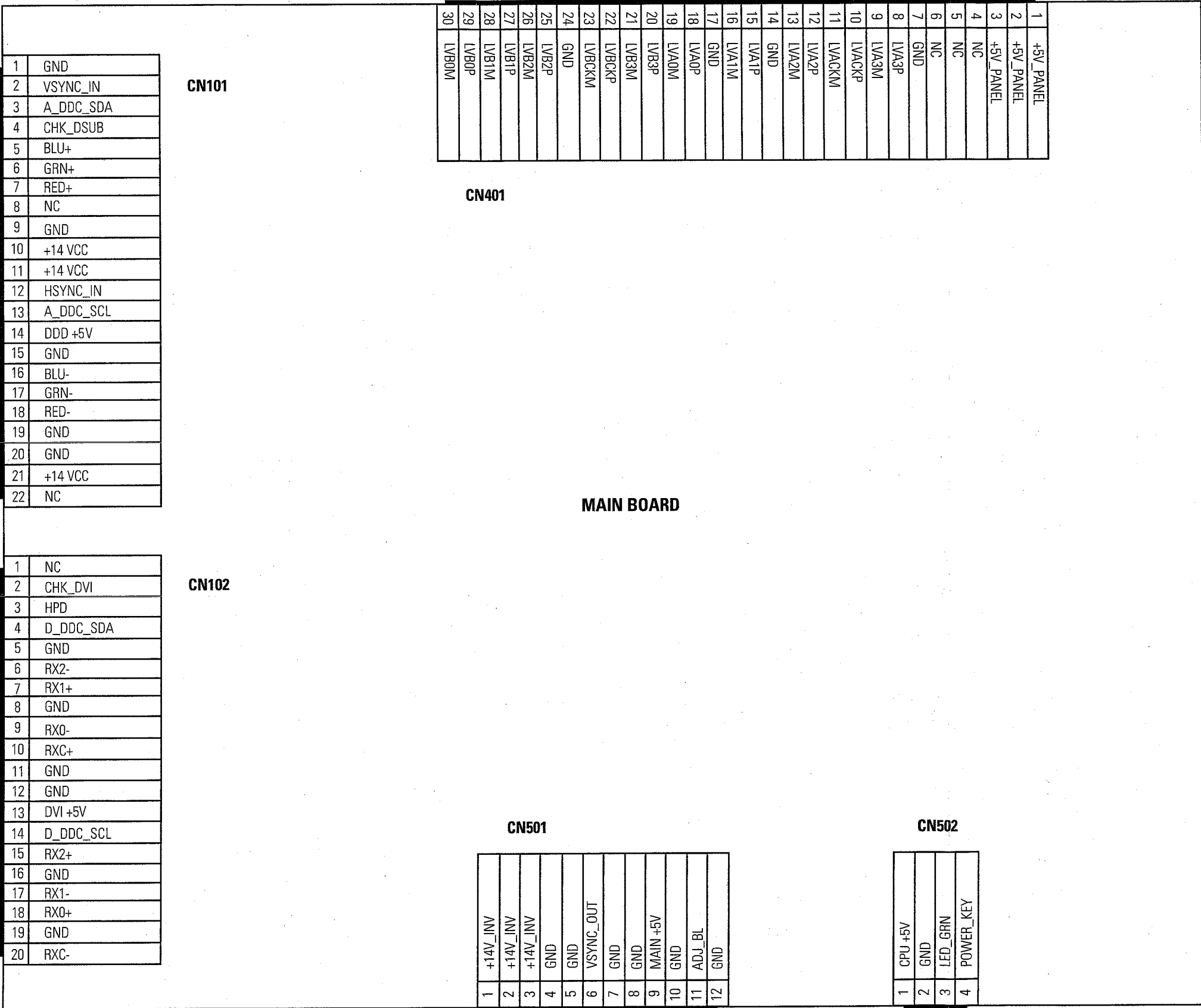
8 Block Diagram

* This Document can not be used without Samsung's authorization.



Memo

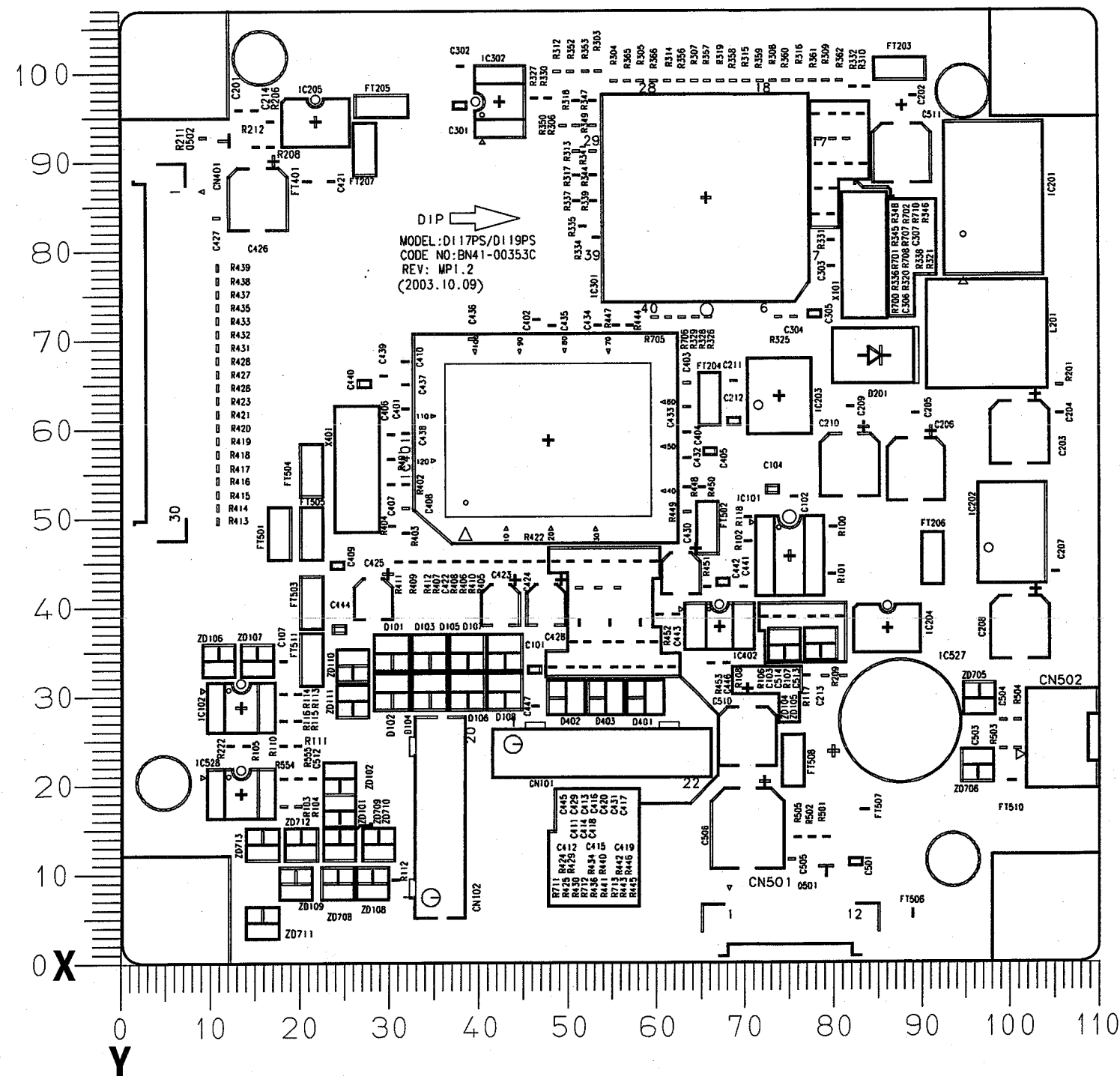
9 Wiring Diagram



Memo

10 PCB Layout

10-1 PCB Layout Top

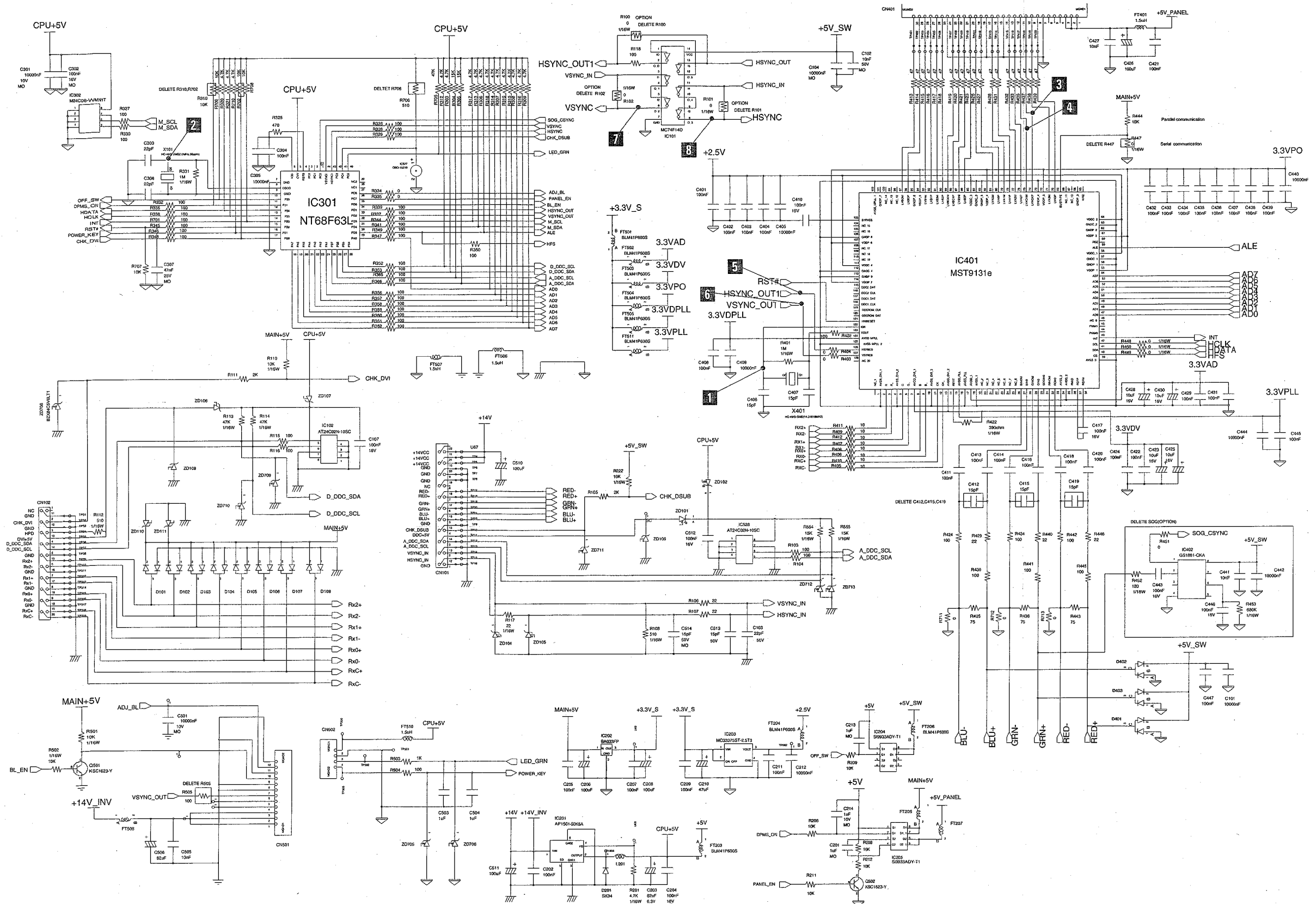


Loc. No.	Description	X	Y
DIODE			
D101	DIODE-SWITCHING	30.2	34.8
D102	DIODE-SWITCHING	30.2	30.4
D103	DIODE-SWITCHING	34.4	34.8
D104	DIODE-SWITCHING	34.4	30.4
D105	DIODE-SWITCHING	38.6	34.8
D106	DIODE-SWITCHING	38.6	30.4
D107	DIODE-SWITCHING	42.8	34.8
D108	DIODE-SWITCHING	42.8	30.4
D201	DIODE-RECTIFIER	84.5	68.1
D401	DIODE-SWITCHING	58.6	29.7
D402	DIODE-SWITCHING	49.6	29.7
D403	DIODE-SWITCHING	54.1	29.7
ZD101	DIODE-ZENER	24.3	17.1
ZD102	DIODE-ZENER	24.3	20.7
ZD104	DIODE-ZENER	74.4	35.6
ZD105	DIODE-ZENER	78.5	35.7
ZD106	DIODE-ZENER	10.8	34.0
ZD107	DIODE-ZENER	15.1	34.0
ZD108	DIODE-ZENER	28.0	8.9
ZD109	DIODE-ZENER	19.4	8.9
ZD110	DIODE-ZENER	25.8	33.4
ZD111	DIODE-ZENER	25.8	29.4
ZD705	DIODE-ZENER	96.5	29.5
ZD706	DIODE-ZENER	96.3	22.0
ZD708	DIODE-ZENER	24.1	8.9
ZD709	DIODE-ZENER	24.3	13.3
ZD710	DIODE-ZENER	28.7	13.3
ZD711	DIODE-ZENER	15.7	4.5
ZD712	DIODE-ZENER	20.0	13.3
ZD713	DIODE-ZENER	15.7	13.3
IC			
IC101	IC-TTL	75.0	45.6
IC102	IC-EEPROM	13.3	28.7
IC201	IC-DC/DC CONVERTER	98.2	86.3
IC202	IC-POSITIVE REG.	100.2	48.6
IC203	IC-VOLTAGE REGULATOR	73.9	63.6
IC204	FET-SILICON	86.0	37.5
IC205	FET-SILICON	21.8	94.6
IC301	IC-MICROCONTROLLER	65.6	85.9
IC302	IC-EEPROM	42.4	96.8
IC401	IC-LCD CONTROLLER	47.7	58.7
IC527	BUZZER-PIEZO	87.5	27.0
IC528	IC-EEPROM	13.3	19.0
TRANSISTOR			
Q501	TR-SMALL SIGNAL	79.1	10.7
Q502	TR-SMALL SIGNAL	13.7	92.5

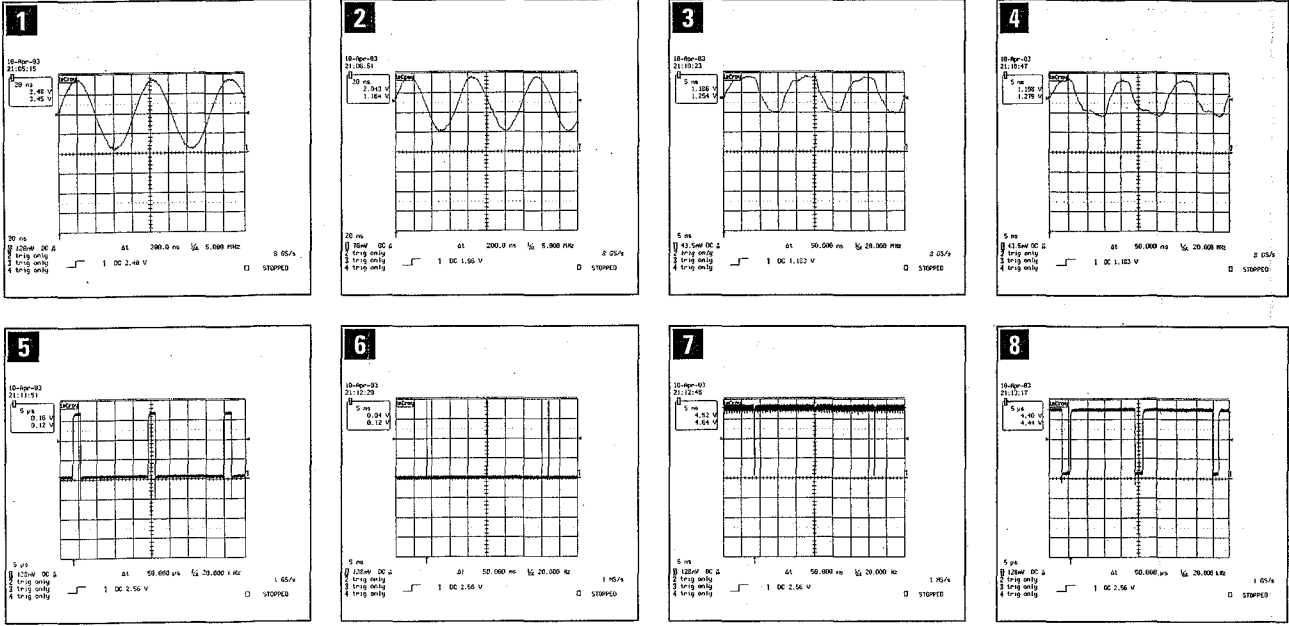
Memo

11 Schematic Diagrams

* This Document can not be used without Samsung's authorization.



11 Schematic Diagrams



12 Panel Description

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	Remarks
SEC	LT140X1-002	BN07-00004A	SA	
SEC	LT150XS-L01	BN07-00009A	SB	
SEC	LT150XS-L01-B	BN07-00022A	SC	
SEC	LTM150XS-L02	BN07-00005A	SD	
SEC	LT181E2-132	BN07-00001A	SE	
SEC	LT150XS-T01	BN07-00010A	SF	
SEC	LTM181E3-132	BN07-00019A	SG	
SEC	LT170E2-131	BN07-10001D	SH	
SEC	LT181E2-131	BN07-10001E	SJ	
SEC	LTM170E4-L01	BN07-00018A	SK	
SEC	LTM240W1-L01	BN07-00015A	SL	
SEC	LTM213U3-L01	BN07-00016A	SM	
SEC	LTM150XH-L01	BN07-00026A	SN	
SEC	LTM150XH-L03	BN07-00027A	SP	
SEC	LTM150XS-L01	BN07-00032A	SQ	DELL(ZPD)
SEC	LTM181E4-L01	BN07-00034A	SR	PVA
SEC	LTM170EH-L01	BN07-00036A	SS	TN
SEC	LTM170E5-L01	BN07-00037A	SU	PVA
SEC	LTM150XH-L11	BN07-00041A	SV	
SEC	LTM213U4-L01	BN07-00039A	SW	PVA
SEC	LTM150XH-L01(ZPD)	BN07-00045A	SX	ZPD
SEC	LTM150XH-L04	BN07-00046A	SY	PANEL
SEC	LTM170W1-L01	BN07-00047A	SZ	TV PANEL
SEC	LTM150XH-L06	BN07-00053A	EA	TV PANEL/450 Sony& EOS TV panel
SEC	LTM153W1-L01	BN07-00054A	EB	NIKE MODEL
SEC	LTM170EH-L05	BN07-00055A	EC	17" EH-L05 panel EOS proj.
SEC	LTM170E5-L03	BN07-00056A	ED	Dell 1702FP pro. E4. EH Compatible
SEC	LTM190E1-L01	BN07-00057A	EE	DELL 1900 FP
SEC	LTM181E5-L01	BN07-00061A	EF	18" narrow bezel GH18PS
SEC	LTM150XP-L01	BN07-00065A	EG	AMLCD PVA PANEL
SEC	LTM240W1-L02	BN07-00062A	EH	15" Wide tv panel
SEC	LTM170EU-L01	BN07-00071A	EJ	Slim design, TN
SEC	LTM170E5-L04	BN07-00072A	EK	E5-L04 6 bits FRC. for IBM
SEC	LTA220W1-L01	BN07-00074A	EL	22" TV PANEL
SEC	LTM170E6-L02	BN07-00075A	EM	AMLCD Narrow & slim design 17" PVA mode
SEC	LTM170W1-L01	BN07-00082A	EN	LTM170W1-L01 ZPD panel
SEC	LTM170EH-L01	BN07-00080A	EP	LTM170EH-L01 ZPD panel
SEC	LTM170E5-L01	BN07-00081A	EQ	LTM170E5-L01 ZPD panel
SEC	LTM170EH-L05	BN07-00083A	ER	LTM170EH-L05 ZPD panel
SEC	LTM170E5-L03	BN07-00084A	ES	LTM170E5-L03 ZPD panel
SEC	LTM170EU-L01	BN07-00085A	ET	LTM170EU-L01 ZPD panel
SEC	LTM170E5-L04	BN07-00086A	EU	LTM170E5-L04 ZPD panel
SEC	LTM170E6-L02	BN07-00087A	EV	LTM170E6-L02 ZPD panel
SEC	LTM150XH-L06	BN07-00091A	EW	LCD TV
SEC	LTM153W1-L01	BN07-00092A	EX	AMLCD WIDE 15",9/10
SEC	LTM170W1-L01	BN07-00100A	EY	code
SEC	LTM170EH-L05	BN07-00097A	EZ	LTM170E5-L05 Panel Code
SEC	LTA400W1-L01	BN07-00109A	S1	AMLCD 40" TV PANEL
SEC	LTM153W1-L01	BN07-00110A	S2	0.280/0.290 , 10000K & ZPD Panel
SEC	LTM150XH-L06	BN07-00111A	S3	0.280/0.290 , 10000K & ZPD Panel
SEC	LTM170W1-L01	BN07-00112A	S4	0.280/0.290 , 10000K & ZPD Panel
SEC	LTM170EH-L05	BN07-00113A	S5	0.280/0.290 , 10000K & ZPD Panel code
SEC	LTM220W1-L01	BN07-00114A	S6	AMLCD 22" TV ZPDpanel
SEC	LTM150XH-L06	BN07-00117A	S7	ZPD Panel code
SEC	LTM153W1-L01	BN07-00118A	S8	ZPD code
SEC	LTM170WP-L01	BN07-00119A	S9	NIKE PVA PANEL
SEC	LTM213U4-L01	BN07-00039A	E1	21.3" NARROW
SEC	LTA260W1-L01	BN07-00121A	E2	VENUS
SEC	LTA220W1-L01	BN07-00074B	E3	22" TV PANEL PANEL CODE
SEC	LTA320W1-L01	BN07-00108A	E4	AMLCD 32" TV PANEL
SEC	LTM213U4-L01	BN07-00124A	E5	NARROW BEZEL 21" PANEL
SEC	LTM170E6-L04	BN07-00129A	E6	HIGHLAND 17" LOW PANEL
SEC	LTM190E1-L01	BN07-00088A	E7	LTM190E1-L01 ZPD panel
SEC	M150X4-L06	BN07-00137A	E8	15" Narrow & Slim panel
SEC	LTA170V1	BN07-00139A	E9	Muse 4:3 VGA TV 17" Pane
SEC	LTM190E1-L02	BN07-00128A	E10	AMLCD Panel 6bit Driver IC
SEC	LTM170EX-L01	BN07-00143A	E11	AMLCD Panel
SEC	LTM170E8-L01	BN07-00144A	E12	AMLCD Panel
SEC	LTM170E6-L04	BN07-00129B	E13	AMLCD ZPD panel

12 Panel Description

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	Remarks
SEC	LTA320W1-L02	BN07-00108B	E14	AMLCD 32" TV panel code
SEC	LTM190E1-L03	BN07-00151A	E15	AMLCD 19" panel
SEC	LTM240W1-L03	BN07-00134A	E16	AMLCD 24" panel
CPT	CLAA150XG09	BN07-00141A	PA	CPT 15" Monitor panel
CPT	CLAA170EA02	BN07-00148A	PB	17" CPT panel
TOSHIBA	LTM15C419(A)	BN07-00002A	TA	
TOSHIBA	LTM15C423(B)	BN07-00006A	TB	
TOSHIBA	LTM18C161	BN07-00008A	TC	
TOSHIBA	LTM15C443	BN07-00031A	TD	
TOSHIBA	LTM15C458	BN07-00043A	TE	
TOSHIBA	LTM15C458S	BN07-00077A	TF	TSB 15" Panel
TOSHIBA	LTM15C458	BN07-00078A	TG	Toshiba ZPD panel
TOSHIBA	LTM15C458S	BN07-00099A	TH	TSB LTM15C458S (ZPD)
HANNSTAR	HSD150MX41(A)	BN07-00020A	NA	TTL
HANNSTAR	HSD150MX12	BN07-00030A	NB	LVDS
TORISAN	TM150XG-22L03(A)	BN07-00021A	RA	
TORISAN	TM150XG-26L06	BN07-00042A	RB	
TORISAN	TM181SX-76N01	BN07-00048A	RC	
TORISAN	TM150XG-26L06	BN07-00059A	RD	15" XGA TN MODE(ZPD)
TORISAN	TM290VX-71N31	BN07-00063A	RE	RS24NS (TORISAN 29" PANEL)
TORISAN	TM396VX-71N31	BN07-00064A	RF	RS24NS (TORISAN 40" PANEL)
TORISAN	TM150XG-26L09	BN07-00073A	RG	15" TV PANEL
TORISAN	TM150XG-26L10	BN07-00089A	RH	L10(D/IC) ZPD
TORISAN	TM150XG-26L10	BN07-00090A	RJ	L10 NORMAL
TORISAN	TM190SX-70N01	BN07-00098A	RK	Torisan 19" Panel
TORISAN	TM181SX-76N01	BN07-00106A	RL	ZPD Panel code
TORISAN	TM190SX-70N01	BN07-00107A	RM	ZPD Panel code
TORISAN	TM290VX-71N31	BN07-00115A	RN	Torisan 29" TV panel
TORISAN	TM396VX-71N31	BN07-00116A	RP Q	Torisan 40" TV panel
TORISAN	TM220VX-71N31	BN07-00125A	RR	TORISAN 22" TV PANEL (ZPD)
TORISAN	TM220VX-71N31	BN07-00127A	RS	TORISAN 22" TV PANEL (HPD)
TORISAN	TM396VX-71N32A	BN07-00150A	RT	120V inverter panel
SHARP	LQ181E1DG11(A)	BN07-10001C	PA	
SHARP	LQ150X1LW71	BN07-00067A	PB	SHARP 15" PVA PANEL
HITACHI	TX38D12VC0CAA(A)	BN07-00003A	HA	
HITACHI	TX43DVC0CAB	BN07-00060A	HB	17" SXGA PVA MODE
HITACHI	TX43D15VC0CAB	BN07-00101A	HC	ZPD Panel
HITACHI	TX51D11VC0CAB	BN07-00122A	HD	20.1" NARROW
HITACHI	TX54D11VC0CAB	BN07-00123A	HE	21.3" NARROW
IBM	ITSX94S	BN07-00017A	IA	
UNIPAC	UM170E0	BN07-00028A	UA	
HYUNDAI	HT15X13	BN07-00035A	DA	
HYUNDAI	HT17E11-200	BN07-00049A	DB	TN MODE
HYUNDAI	HT17E11-300	BN07-00093A	DC	HT17E11-300 ZPD panel
HYUNDAI	HT17E11-400	BN07-00094A	DD	HT17E11-400 normal panel
HYUNDAI	HT17E11-400	BN07-00095A	DE	HT17E11-400 ZPD panel code
HYUNDAI	HT17E12	BN07-00096A	DF	HT17E12 (Narrow & slim Design)
HYUNDAI	HT17E12	BN07-00105A	DG	ZPD Panel code
HYUNDAI	HT15X15-D00	BN07-00146A	DH	Ares 15" Hydix TV Panel
HYUNDAI	HT15X15-D01	BN07-00146B	DJ	Ares 15" Hydix TV Panel HPD
ACER	L170E3	BN07-00044A	AA	TN(ADT)
ACER	M170EN05	BN07-00076A	AB	AU 17" Panel (Narrow & slim design)
ACER	M170EN05	BN07-00102A	AC	ZPD Panel code
CHIMEI	M170E3-L01	BN07-00050A	CA	TN PANEL
CHIMEI	M150X3-L01	BN07-00051A	CB	COMPATIBLE
CHIMEI	M170E4-L01	BN07-00052A	CC	MVA PANEL
CHIMEI	M150X2-L01	BN07-00066A	CD	CHIMEI 15" PVA PANEL
CHIMEI	M150X3-L01	BN07-00079A	CE	Chimei ZPD panel
CHIMEI	M170E3-L01	BN07-00103A	CF	ZPD Panel code
CHIMEI	M170E4-L01	BN07-00104A	CG	ZPD Panel code
CHIMEI	V296VW1-L01	BN07-00120A	CH	MVA
CHIMEI	M170E6-L02	BN07-00126A	CJ	HIGHLAND 17" LOW PANEL
CHIMEI	M190E2-L01	BN07-00131A	CK	GH19AS,BS CHIMEI PANE
CHIMEI	M150X4-L06	BN07-00137A	CL	15" Narrow & Slim panel
CHIMEI	M170E6-L01	BN07-00133A	CM	2003-03-11
CHIMEI	M170E6-L01	BN07-00133B	CN	ZPD panel
CHIMEI	V201V1-T01	BN07-00135A	CP	CHIMEI 20.1" panel
CHIMEI	M170E6-L02	BN07-00126B	CQ	HIGHLAND 17" LOW PANEL ZPD panel
CHIMEI	M170E6-L05	BN07-00152A	CR	CMO 17" panel code
CHIMEI	M170E6-L05	BN07-00152B	CS	CMO 17" ZPD panel code